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# Archeological Reconnaissance of Selected Trail Corridors, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas 2004 - 2010

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TEXAS ANTIQUITIES PERMITS 3315 AND 5139

# TRAILS THROUGH TIME:

## ARCHEOLOGICAL RECONNAISSANCE OF SELECTED TRAIL CORRIDORS, BIG BEND RANCH STATE PARK, PRESIDIO AND BREWSTER COUNTIES, TEXAS, 2004–2010

## VOLUME 1

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# Trails Through Time: Archeological Reconnaissance of Selected Trail Corridors, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas 2004 - 2010

## Volume 1

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Texas Antiquities Permit Nos. 3315 and 5139


State Parks Division
Cultural Resources Program

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## ABSTRACT

Between 2004 and 2010, Texas Parks and Wildlife Department (TPWD) archeologists conducted reconnaissance level archeological investigations of selected trails at Big Bend Ranch State Park, Brewster and Presidio Counties, Texas. The purpose of the investigations was to provide cultural resources information that would be beneficial in developing a multi-use trail system in the park that would avoid both direct and potential secondary impacts to archeological sites, when possible, or provide recommendations for mitigative measures, when necessary. These investigations also provide the baseline data needed for conducting future conditions assessments on these sites.

During the course of these investigations, a total of 188 kilometers (117 miles) of trails were surveyed. The majority of these trails followed existing ranch roads, while the remainder followed drainages, existing livestock or game trails, or were newly created. New trail construction was coordinated with the Texas Historical Commission via interim reports. On average, the survey corridors were approximately 100 m (330 ft) wide, resulting in a total of about 7,456 acres being examined for archeological resources during the project. The examined trail routes are scattered across the park, providing a good cross-section of much of the topography in the area and the archeological sites that occur in these settings. Seventy-two previously recorded archeological sites were examined during the investigations, and a total of 159 previously unknown archeological sites, with cultural components ranging in age from the Early Paleoindian period to the mid-twentieth century, were recorded. Among the Native American site types are open habitations, rockshelter habitations, rock imagery sites, quarry sites, lithic scatters, isolated hearths, rock cairns and vision quest sites. Euro-American sites include open campsites, a wide variety of ranching facilities, cinnabar mining sites, candelilla wax processing sites, and historic graffiti. A total of 169 prehistoric and historic isolated finds were also documented during the investigation, consisting primarily of isolated cultural features or individual artifacts.

Discussions of the archeological resources in this report include recommendations for the management and protection of sites examined during the present investigations. Site monitoring schedules and recommendations for nomination of significant sites as official State Antiquities Landmarks are often included.

# Trails Through Time: Archeological Reconnaissance of Selected Trail Corridors, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas 2004 – 2010

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## ACKNOWLEDGEMENTS

The archeological surveys and reconnaissance level investigations of the present trail corridors at Big Bend Ranch State Park were accomplished with the help of many individuals. The fieldwork for this project was conducted by TPWD Archeology Survey Team members Margaret Howard, Luis Alvarado, Logan McNatt, and Joshua Gibbs. TPWD Archeology Laboratory personnel, including Aina Dodge and Stephen Garrett also helped conduct fieldwork, as did TPWD Cultural Resources Coordinators Todd McMakin, Kent Hicks, Tony Lyle, and Tim Roberts. Tim Roberts also served as the Principal Investigator for this project.

Among the interesting and important aspects of the present project were the artifact analyses. The analyses and subsequent write-up of the prehistoric and historic items recovered during these investigations were largely completed by the Park Archeologist for Big Bend Ranch State Park, Tim Gibbs, and Big Bend Ranch State Park Trail Technician and archeologist Amber Harrison. Tim Gibbs was also responsible for the artifact photographs in this report. The artifact analyses and photography was made easier with the use of comparative collections and equipment provided by the Center for Big Bend Studies (CBBS), Sul Ross State University, Alpine, Texas. In addition, the Director of the CBBS, William 'Andy' Cloud, and former CBBS archeologist, Robert 'Bobby' Gray, shared their expertise in the identification of some of the artifacts recovered during the Big Bend Trails Survey.

Additional examinations of the Paleoindian projectile points recovered during this project were also conducted by staff at the Gault School of Archeological Research, Texas State University, including Dr. Michael Collins, Dr. Robert Lassen, Dr. Tom Williams, and Nancy Velchoff. Jennifer Anderson, Project Archeologist with Simms and Associates, LLC was also consulted in the identification of the Angostura point recovered from 41PS159.

A sample of pottery sherds recovered from Big Bend Ranch State Park was subjected to Instrumental Neutron Activation Analysis (INAA) and petrographic analysis. Dr. Darrell Creel, Fort Davis, Texas, prepared the specimens for the INAA analysis, which was conducted by Dr. Jeffrey R. Ferguson and Dr. Michael D. Glascock at the Archaeometry Laboratory, Research Reactor Center, University of Missouri, Columbia. Dr. David G. Robinson, Austin, Texas, conducted the petrographic analysis of the sherds as well as several sediment samples collected from the state park.

Tim Gibbs and Joshua Gibbs generated the geodatabase for this project and produced the extensive maps used during the fieldwork, site form preparation, and production of this report. Joshua Gibbs and Tim Roberts combined efforts to complete the electronic site forms. TPWD Archeology Laboratory staff Aina Dodge, Marni Francell, Toni Fischer and Stephen Garrett made the necessary preparations to curate the artifacts, as well as the extensive archival documentation generated during this project.

Several individuals contributed to the writing of this report, including Tim Roberts, Tim Gibbs, Amber Harrison, and Joshua Gibbs. Aina Dodge, Marni Francell, and Amber Harrison edited the report, and TPWD Cultural Resources Coordinator Rich Mahoney formatted the report. A sincere thank you is extended to all of these individuals for all their work in completing this project.

Finally, completion of the fieldwork for this project would have been much more difficult if not for the logistical support provided by the staff at Big Bend Ranch State Park and the Barton Warnock Environmental Education Center, Lajitas. Their support was and continues to be much appreciated.

This project greatly benefitted from the hard work of all involved, including anyone that may have been inadvertently omitted from these acknowledgements. A big ‘thank you’ to all.

# Chapter 1
# Introduction

Tim Roberts

## PROJECT BACKGROUND

In 2004, the Texas Parks and Wildlife Department (TPWD) initiated an extensive program of multi-use trail development at Big Bend Ranch State Park (BBRSP) in Brewster and Presidio Counties, Texas (Figure 1). Originally, it was anticipated that this program would continue for five years, for the purpose of increasing public access to BBRSP by gradually developing a broad interconnecting system of trails across the approximately 315,000-acre park. Ultimately, however, this program of establishing trails within BBRSP continued well beyond five years. As a step toward protecting the cultural resources at BBRSP during the trail development process, and subsequent use of these trail corridors by park visitors, survey level archeological investigations were conducted for many trail corridors during the 2004 through 2010 field seasons, under Antiquities Permit 3315 and 5139. Cultural Resources Coordinator Tim Roberts is the Principal Investigator for these projects and the primary author of this report.

The trail system was planned to utilize, to the extent possible, some of the more than 600 miles of the park's existing unimproved two-track ranch roads, as well as livestock trails, creek bottoms, or other features. This trail development strategy will help minimize any new impacts, directly or indirectly, to archeological sites and will avoid creating new scars on the landscape. In addition to looking at the trail impact, consideration was also given to the potential for secondary impacts (e.g., vandalism or erosion) to archeological sites, rock imagery locations, or historic structures along proposed trail corridors. The trails are about eight feet wide on average and the survey corridors were about 330 ft (100 m) wide. Areas adjacent to the trail corridors that contain archeological sites within view of the trail route were also surveyed. The data gathered during these investigations are being used to facilitate monitoring of archeological resources and to coordinate with the Texas Historical Commission (THC) when new trails are constructed or when federal funds are used in the maintenance of existing trails.

Trail corridors that were investigated under Antiquities Permit 3315 are the Rancherias Link, Yedra Canyon, Old Entrance, Terneros Loop, Terneros Creek, Panhandle, Auras Cut-Off, Bofecillos, Las Burras, Nopalera, Ojito Adentro Cut-Off, and Yedra Jump Trails. Trail corridors investigated under Antiquities Permit 5139 are the Lower Fresno Canyon, Pila de los Muchachos, South Leyva, Llano Loop to Fresno Canyon, Chilicote to Crawford-Smith Overlook, Chorro Vista to Madrid Falls, and Lower Government Road trail corridors. These were the trail names used during the archeological investigations; the official names of some trails have changed since the investigations were conducted. All trails investigated under both permits are shown on Figure 2.

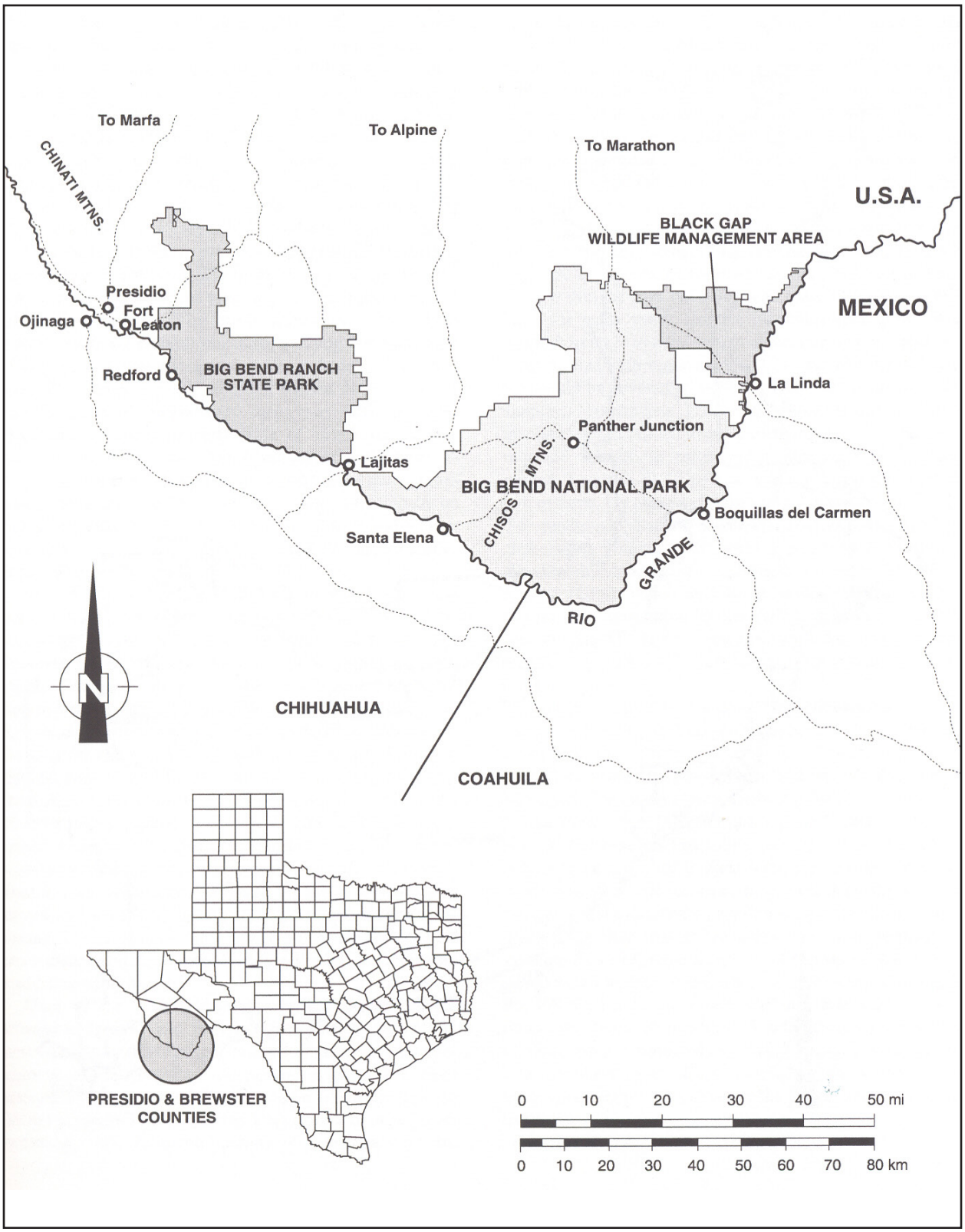


**Figure 1.** Location of Big Bend Ranch State Park.

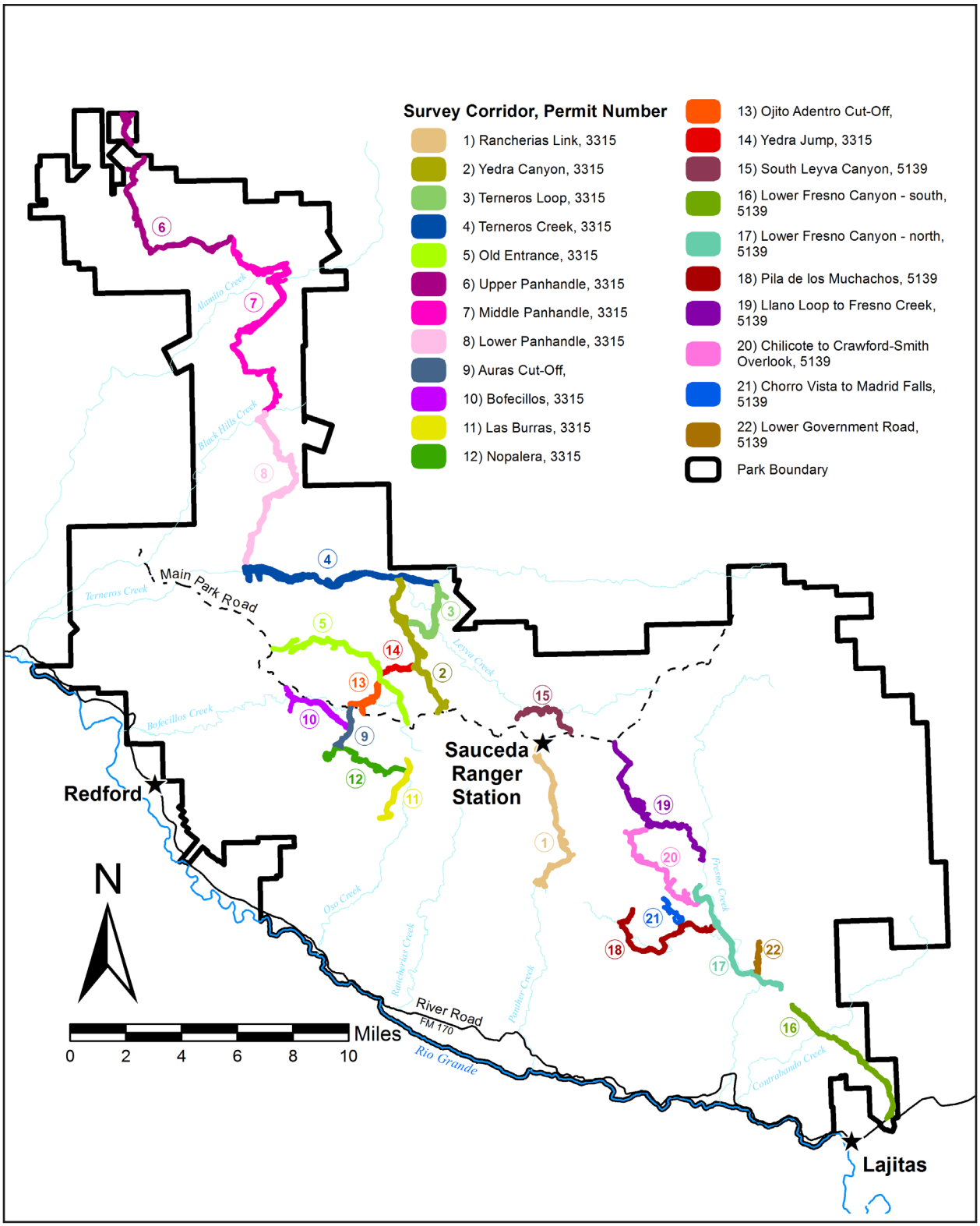


**Figure 2.** Map showing locations of trails surveyed.

Some details of the investigations have been previously documented in interim reports. A brief letter report was presented to the THC on January 20, 2006, summarizing the results of the archeological survey of the Rancherias Link Trail, which connects the existing Rancherias Loop Trail with the Sauceda Ranger Station in the interior of BBRSP, via an existing unimproved two-track road. In January 2009, an interim report was submitted to the THC that again included the archeological survey results for the Rancherias Link Trail, as well as the Yedra Canyon, Terneros Loop, and Terneros Creek Trails. (These were the trail routes that were originally listed on Antiquities Permit 3315, prior to the addition of other trail routes to this permit.) Another interim report was submitted to the THC in July 2009 that highlighted the findings of archeological surveys along eight segments of trails, including the Auras Cut-Off, Bofecillos Trail, Nopalera Trail, Ojito Adentro Cut-Off, Panhandle Trail, South Leyva Trail, Yedra Canyon Trail, and Yedra Jump. These trails were to be constructed or maintained by AmeriCorps crews in the fall of 2009; however, work on these trails never materialized at that time. Subsequently, the THC requested additional details about trail reroutes that were proposed to avoid archeological sites; these details are included in the recommendations of this report. Finally, in July 2010, a letter report was submitted to the THC summarizing the findings of archeological investigations along the Pila de los Muchachos, Llano Loop to Fresno Canyon, Chilicote to Crawford-Smith Overlook, and Chorro Vista to Madrid Falls trail segments. The information included in these interim reports is again summarized within this report.

To the extent possible, summary discussions in this report are structured to complement the work being done by the Center for Big Bend Studies (CBBS), Sul Ross State University, Alpine, Texas, under their Trans-Pecos Archeological Program. This five-year program was established by the CBBS in an effort to bring the Trans-Pecos region, including the BBRSP study area, up to the same level of archeological knowledge as other regions of Texas and beyond, in terms of theoretical underpinnings, scientific methodologies, and interpretations of data. The CBBS is using a thematic approach to investigate at least six regional research topics to interpret data from site excavations (Mallouf 2006:1-3). While the BBRSP survey results do not provide the same level of data that site excavations produce, these survey results will still make valuable contributions to the understanding of the region.

The Center for Big Bend Studies research topics include:

1. Paleoindians in the Trans-Pecos and Big Bend (9500-6500 B.C.)
2. Human adaptations during the Archaic Tradition (6500 B.C-800 A.D.)
3. The Livermore Phase and aspects of ritualism in late prehistory (800-1300 A.D.)
4. Nomads and farmers at La Junta de los Rios (1200-1800 A.D.)
5. Spanish exploration and missionization of Native Americans in the Trans-Pecos (1535-1825 A.D.)
6. Trans-Pecos rock imagery research

Archeological investigations and site assessments were conducted by the TPWD Archeology Survey Team and Cultural Resources Coordinators, working in varying capacities and for different lengths of time. At the time of the investigations, the Archeology Survey Team consisted of Margaret Howard, Aina Dodge, Logan McNatt, Luis Alvarado, Joshua Gibbs, and Stephen Garrett. Cultural Resources Coordinators were Kent Hicks, Tony Lyle, and Todd McMakin. In addition, Betty Ackerson, Exhibit

Technician for the BBRSP Complex, and Anita Garza, Administrative Technician at the TPWD Headquarters, Austin, helped during two field seasons. Nelson Rodriguez, Park Archeologist/ Interpreter for BBRSP, participated in one field season. The TPWD staff at the Sauceda Ranger Station and the Barton Warnock Environmental Education Center provided logistical support to the surveyors.

When possible, avoidance of archeological sites was recommended along segments of new trail construction; reroutes of the original trail corridors were designated in these instances and shown on the appropriate trail maps in this report. Many of these same sites have been previously designated as official State Antiquities Landmarks, or merit designation. Sites that merit designation, but that have not been previously designated as official State Antiquities Landmarks, are recommended for nomination. All site monitoring will be conducted by the TPWD Cultural Resources Coordinator for the Trans-Pecos region of west Texas, the BBRSP Archeologist, or other park staff that have participated in TPWD certification training to monitor cultural resources.

## SUMMARY OF RESULTS

Between 2004 and 2010, a total of 7,457 acres were surveyed along trail corridors within the park (Table 1; see Figure 2). Investigators documented 232 sites and 189 isolated finds. An overview of the results of each trail survey is provided below. Site descriptions, recommendations, and detailed maps are included in Chapter 5 and site summaries are found in Appendix A. Information on isolated finds is in Appendix B.

### 2004 Field Season

In 2004, archeological surveys were conducted of the Rancherias Link and Yedra Canyon multiuse trails. The trails investigated in 2004 utilize existing unimproved two-track roads, approximately eight feet in width. The survey corridor was about 330 ft (100 m) wide. Approximately 13 miles of trail corridor were surveyed in 2004. The combined area surveyed is approximately 933 acres. Within the trail corridors, 17 archeological sites were recorded and 16 isolated finds were documented. In addition, one previously recorded site which is outside the trail corridor was re-recorded. Discussion of sites outside trail corridors is at the end of Chapter 5.

#### *Rancherias Link Trail*

The Rancherias Link Trail is approximately seven miles long and runs between the existing Rancherias Trail and the Sauceda Ranger Station in the interior of the state park. The survey encompassed approximately 411 acres. Three previously recorded sites were re-recorded (41PS512, 41PS542, and 41PS557); five sites (41PS930-41PS934) were newly recorded; and 12 isolated finds were documented along the corridor.

#### *Yedra Canyon Trail*

The Yedra Canyon Trail is approximately six miles long and extends from the main park road, through Yedra Canyon, to Terneros Creek. Most of the Yedra Canyon Trail corridor was surveyed in 2004. However, due to time constraints, approximately one mile on the north end of the trail was not surveyed until the 2005 field season. The Yedra Canyon Trail survey encompassed 522 acres. One previously recorded site (41PS621), eight newly recorded sites (41PS935-41PS942), and four isolated finds were documented along the trail corridor.

### 2005 Field Season

During the 2005 field season, archeological surveys were conducted of the Old Entrance, Terneros Creek, and Terneros Loop trail corridors, as well as the remainder of the Yedra Canyon Trail corridor from the previous field

**Table 1.** Summary of investigations by field season and trail.

| FIELD SEASON | TRAIL | FIELD DATES | ACRES SURVEYED | # OF SITES | # OF ISOLATED FINDS |
|---|---|---|---|---|---|
| 2004 | Rancherias Link | Feb-04 | 411 | 8 | 12 |
| 2004-2005 | Yedra Canyon | Feb-Mar-04; Feb-05 | 522 | 9 | 4 |
| 2005 | Old Entrance | Feb-05 | 464 | 15 | 9 |
| 2005 | Terneros Loop | Feb-05 | 398 | 2 | 2 |
| 2005 | Terneros Creek | Mar-05 | 658 | 33 | 8 |
| 2006-2007 | Panhandle | Nov-06; Feb-07 | 1,943 | 45 | 42 |
| 2008 | Nopalera | Feb-08 | 234 | 6 | 6 |
| 2008 | Auras Cut-Off | Feb-08 | 100 | 5 | 10 |
| 2008 | Ojito Adentro Cut-Off | Feb-08 | 131 | 3 | 0 |
| 2008 | Yedra Jump | Feb-08 | 113 | 1 * | 1 |
| 2008 | Bofecillos | Feb-08 | 201 | 8 | 6 |
| 2008 | Las Burras | Feb-08 | 234 | 2 | 3 |
| 2009 | Lower Fresno Canyon | Feb-09 | 682 | 27 | 25 |
| 2009 | Pila de los Muchachos | Feb-09 | 287 | 15 | 12 |
| 2009 | South Leyva | Apr-95 | 177 | 11 | 12 |
| 2010 | Llano Loop to Fresno Canyon | Jan-10 | 453 | 9 | 15 |
| 2010 | Chilicote to Crawford-Smith Overlook | Feb-10 | 294 | 13 | 12 |
| 2010 | Chorro Vista to Madrid Falls | Feb-10 | 64 | 6 | 5 |
| 2010 | Lower Government Road | Feb-10 | 91 | 3 | 4 |
| various | Off Trail | various | - | 12 | 1 |
| | | Totals | 7,457 | 232 | 189 |

* reported with Yedra Canyon Trail

season. These multi-use trail routes cover a total of 18 miles of existing unimproved two-track roads. Some portions of the Terneros Creek Trail also followed the drainage bottom. The existing roads are approximately eight feet wide and the survey corridor for all trails was about 330 ft (100 m) wide. The combined area surveyed in 2005 is approximately 1,519 acres. A total of 50 archeological sites and 19 isolated finds were documented inside the trail corridors. Outside the trail corridors, one previously recorded site and three newly recorded sites were documented. Discussion of sites outside trail corridors is at the end of Chapter 5.

***Old Entrance Trail***

The Old Entrance is 7.5 miles long and forms a loop extending from the main park road near a historic site known as Rancho Viejo (41PS438), tying back into the main park road near the Agua Adentro corrals. The survey corridor encompassed approximately 464 acres and included re-recording three previously recorded archeological sites (41PS438, 41PS476, and 41PS668) and recording 12 newly discovered sites (41PS958-41PS969). Nine isolated finds were documented during the survey of the Old Entrance Trial corridor.

***Terneros Creek Trail***

The Terneros Creek Trail is 7.55 miles long. It follows the creek bed as well as the existing unimproved two-track road. The width of the existing road is approximately eight feet in width, while the width of the creek bed is variable. The Terneros Creek Trail extends westward from the confluence of Terneros Creek and Leyva Canyon to Botella Camp. The survey of this corridor encompassed approximately 658 acres. A total of 32 newly recorded sites (41PS973-41PS1004) were recorded and one previously recorded site (41PS491) was re-recorded during the survey of the Terneros Creek Trail corridor. Eight isolated finds were documented in this trail corridor.

***Terneros Loop Trail***

The Terneros Loop Trail is approximately 3.35 long. It extends from Terneros Creek and Yedra Canyon and encircles the confluence of Terneros Creek and Leyva Canyon. The survey of this corridor encompassed approximately 398 acres. Two sites (41PS970 and 41PS971) were newly recorded during the survey of this corridor. Two isolated finds were recorded in the Terneros Loop Trail corridor.

**2006/2007 Field Season**

One trail, the Panhandle Trail, was surveyed during the 2006/2007 field season. The Panhandle Trail utilizes approximately 28.5 miles of an existing unimproved two-track road, in the panhandle portion of BBRSP. The existing road is approximately eight feet wide and the survey corridor was about 330 ft (100 m) wide.

***Panhandle Trail***

The trail extends northward from Botella Camp (aka Botilla Camp) to Cienega Camp. The survey of this corridor encompassed approximately 1,943 acres. Within the survey corridor, a total of 14 previously recorded archeological sites (41PS505, 41PS507, 41PS508, 41PS510, 41PS563, 41PS564, 41PS566, 41PS576, 41PS581, 41PS601-603, 41PS608, and 41PS609) were re-recorded; 31 newly recorded sites (41PS1021-41PS1051), and 42 isolated finds were documented. Outside the trail corridor, four previously recorded sites (41PS572, 41PS574, 41PS575, and 41PS577) and one newly recorded site (41PS1052) were documented. Discussion of sites outside the trail corridor is at the end of Chapter 5.

**2008 Field Season**

Six trails were investigated during the 2008 field season: the Auras Cut-Off, Bofecillos, Nopalera, Ojito Adentro Cut-Off, and Yedra Jump trails, as well as a portion of the Las Burras Trail. These multi-use trail routes cover a total of 16.1 miles of existing unimproved two-track roads, arroyo bottoms, historic trails, and proposed new trail construction. Existing roads, when present, are approximately eight feet in width. The survey corridor for all trails was about 330 ft (100 m) wide. The combined area surveyed for all six corridors is approximately 1,013 acres. Within the trail corridors, a total of 25 archeological sites and 26 isolated finds were documented. Outside the trail corridors, one previously recorded site and one newly recorded site were documented. Discussion of sites outside trail corridors is at the end of Chapter 5. Additionally, site 41PS936, which

was originally recorded by the TPWD Archeology Survey Team in 2004, was intensively reinvestigated.

***Auras Cut-Off Trail***

The Auras Cut-Off Trail requires the construction of new trail. This multi-use trail will measure three feet in width, and extend approximately 1.8 miles from Nopalera Road to the main park road in the central part of BBRSP. The area surveyed for the Auras Cut-Off Trail is 100 acres. Five previously unrecorded sites (41PS1058-1061, and 41PS1069) were recorded during the survey. Ten isolated finds were identified.

***Bofecillos Trail***

The Bofecillos Trail, like the Auras Cut-Off Trail, also requires new trail construction. This multi-use trail will measure three feet in width, and will extend approximately 3.2 miles from the main park road, along the north side of Agua Adentro Mountain. It will connect with the previously discussed Auras Cut-Off Trail in the central part of BBRSP. The area surveyed totals 201 acres. Six previously recorded archeological sites were re-recorded (41PS199, 41PS201, 41PS436, 41PS437, and 41PS1066); two newly discovered sites were recorded (41PS1065 and 41PS1067), and six isolated finds were documented along the trail corridor.

***Las Burras Trail***

The segment of Las Burras Trail corridor that was surveyed in 2008 follows approximately 3.1 miles of existing unimproved two-track road from the Oso Loop road to a point on an upland divide between Tapado and Las Burras Canyons, in the central part of BBRSP. The survey of Las Burras Trail corridor encompassed approximately 234 acres. One previously recorded site (41PS174) was re-recorded, one newly discovered site was recorded (41PS1070), and three isolated finds were documented during this investigation.

***Nopalera Trail***

The Nopalera Trail follows an existing unimproved two-track road westward approximately 3.9 miles from the previously discussed Las Burras Trail. It extends to the proposed trail route identified as the Auras Cut-Off Trail, in the central part of BBRSP. The area surveyed totals 234 acres. Six previously unrecorded archeological sites (41PS1053-41PS1057 and 41PS1062) and six isolated finds were recorded within this survey corridor.

***Ojito Adentro Cut-Off Trail***

The Ojito Adentro Cut-Off Trail requires new trail construction. This trail extends northeast from the main park road approximately 1.9 miles to the Yedra Jump Trail, in the central part of BBRSP. The total area surveyed was 131 acres. One previously recorded archeological site (41PS186) and two newly discovered sites (41PS1063 and 41PS1064) were recorded within this survey corridor.

***Yedra Jump Trail***

The Yedra Jump Trail is a multi-use trail that utilizes approximately 1.8 miles of an existing unimproved two-track road. The road extends westward from the Yedra Canyon Trail to the Old Entrance Road Trail in the central part of BBRSP. The area surveyed is approximately 113 acres. One previously recorded archeological site (41PS936) and one isolated find were recorded during the investigation of this corridor. Site 41PS936 is located at the junction of Yedra Jump Trail and the Yedra Canyon Trail. Description of this site is located in the Yedra Canyon Trail section of the report.

**2009 Field Season**

The Lower Fresno Canyon, Pila de los Muchachos, and the South Leyva trails were surveyed during the 2009 field season. These multi-use trail routes consist of 21 miles of existing unimproved two-track roads, arroyo bottoms, his-

toric trails, and new trail construction. Existing roads, when present, are approximately eight feet wide. The survey corridor for all trails was about 330 ft (100 m) wide. The combined survey area for all 2009 corridors was approximately 1,146 acres. Fifty-three sites and 49 isolated finds were documented during the 2009 field season.

***Lower Fresno Canyon Trail***

The Lower Fresno Canyon Trail is a multi-use trail that extends 12.1 miles from FM 170 (also known as the River Road), near the Barton Warnock Environmental Education Center, northwest past the Whitroy Mine, and into Fresno Canyon. The trail then continues northward within Fresno Canyon to the Crawford-Smith Ranchstead (41PS38). The trail utilizes existing unimproved two-track roads and short segments of the Fresno Canyon drainage. Along roads, the width of the trail is eight feet; the width varies along trail segments that fall within Fresno Creek. A total of 682 acres were surveyed along the corridor. Ten previously recorded archeological sites (41BS763, 41PS36, 41PS38, 41PS39, 41PS162-164, 41PS166, 41PS471, and 41PS472) were re-recorded; 17 newly recorded sites (41BS1916-1919, 41PS1077-1088, and 41PS1102) and 25 isolated finds were documented during this survey.

***Pila de los Muchachos Trail***

The multi-use Pila de los Muchachos Trail utilizes 6.95 miles of existing unimproved two-track road, and extends southward from the road to Madrid Falls, past the Pila de los Muchachos primitive campsite, into Arroyo Primero, eventually connecting with the Lower Fresno Canyon Trail. A total of 287 acres were surveyed along this corridor. Four previously recorded archeological sites (41PS31, 41PS32, 41PS35, and 41PS167) were re-recorded; 11 newly discovered sites (41PS1089-1099) were recorded, and 12 isolated finds were documented.

***South Leyva Trail***

The South Leyva Trail extends from the South Leyva Campground, northeast of the Sauceda Ranger Station, westward approximately three miles to the Cinco Tinajas Trailhead in BBRSP. Much of this multi-use trail follows the Leyva Canyon drainage. As a result, the width of the trail is variable. The area surveyed encompassed 177 acres. Five previously recorded archeological sites (41PS456, 41PS513, 41PS515, 41PS516, and 41PS856) were re-recorded; six newly recorded sites (41PS1071-1075, and 41PS1157) and 12 isolated finds were documented.

**2010 Field Season**

Four trail corridors were surveyed during the 2010 field season: Chilicote to Crawford-Smith Overlook, Chorro Vista to Madrid Falls, Llano Loop to Fresno Creek, and a segment of the Lower Government Road. These multi-use trail routes cover a total of 17 miles of existing unimproved two-track roads, historic trails, and new trail construction. Existing roads, when present, are approximately eight feet in width. The survey corridor for all trails was about 330 ft (100 m) wide. The combined area surveyed for all corridors in 2010 is approximately 902 acres. During these investigations, a total of 31 sites and 36 isolated finds were documented. In addition to trail surveys, intensive recording, including detailed mapping, was conducted at sites 41PS38 (Crawford-Smith Ranchstead), 41PS471 (Wax Factory), and 41PS1102 (Buena Suerte Mill).

***Chilicote to Crawford-Smith Overlook Trail***

The Chilicote to Crawford-Smith Overlook Trail extends south from Chilicote Spring to Mexicano Falls, then to Fresno Canyon south of the Crawford-Smith Ranch site (41PS38). This trail is approximately 6.2 miles in length, and utilizes an existing unimproved two-track road (eight feet wide), historic trail, and new trail.

The maximum width of the trail in areas where construction was necessary is three feet. A total of 294.5 acres were surveyed during the investigation of this trail corridor. Eight previously recorded archeological sites (41PS42, 41PS43, 41PS528, 41PS735-737, 41PS743, and 41PS744) were re-recorded; five newly recorded sites (41PS1109-1113) and ten isolated finds were documented within this trail corridor.

***Chorro Vista to Madrid Falls Trail***

The Chorro Vista to Madrid Falls Trail, including a Madrid Falls overlook, is 1.95 miles in length and about three feet wide. Portions of this trail followed existing social trails, however, the entire route is considered new trail construction for the purposes of the present archeological investigation. A total of 64 acres were surveyed along the Chorro Vista to Madrid Falls Trail corridor. Four previously recorded archeological sites (41PS30, 41PS46, 41PS47, and 41PS745) were re-recorded; two newly recorded sites (41PS1114 and 41PS1115) and five isolated finds were documented.

***Llano Loop to Fresno Creek Trail***

The Llano Loop to Fresno Canyon Trail extends south from the Llano Loop/Main Park Road to Chilicote Spring and then east and south to Fresno Canyon at its confluence with Arroyo Segundo. A portion of this trail follows an existing unimproved two-track road, which is approximately eight feet in width. The remainder of the trail requires new construction and is about three feet in width. The area surveyed totals 453 acres. Five previously recorded archeological sites (41PS158, 41PS159, and 41PS473-475) were re-recorded; four newly recorded sites (41PS1105-1108) and 15 isolated finds were documented within this trail corridor. Following the archeological survey, the originally proposed trail route was slightly rerouted at its eastern terminus to avoid archeological sites 41PS158 and 41PS159. Fifteen isolated finds were documented along the Llano Loop to Fresno Canyon Trail.

***Lower Government Road Trail***

The Lower Government Road Trail extends north from the Lower Fresno Canyon Trail. This trail utilizes an historic road about eight feet in width. Due to time constraints, only 1.5 miles of the Lower Government Road Trail was surveyed. The survey encompassed 91 acres. Three newly discovered sites (41PS1116-1118) and four isolated finds were recorded during the survey of the Lower Government Road Trail.

# Chapter 2
# Environmental Context

Tim Roberts

Presently, Big Bend Ranch State Park encompasses over 315,000 acres or about 492 square miles in the Trans-Pecos region of West Texas, and ranges in elevation from about 5,135 feet at the summit of Oso Mountain to near 2,300 feet along the Rio Grande west of Lajitas. Larger than the state of Rhode Island, the state park is comprised of several physiographic areas, each characterized by distinctive geological, geomorphological, and hydrological resources. The park is also home to a variety of flora and fauna. This range of environmental niches has attracted human inhabitants to the area for thousands of years, perhaps extending back as early as 12,000 years ago. This chapter describes the environmental context within which the prehistoric and historic inhabitants of what is now Big Bend Ranch State Park lived, and includes sections on the physiography, geology, soils, climate, flora and fauna, and paleoenvironment of the area.

### Physiography

As indicated, Big Bend Ranch State Park encompasses about 315,000 acres in the Trans-Pecos region of West Texas, a region of the Chihuahuan Desert that is bound by the woodlands of the Edwards Plateau on the east, and by the grasslands of the Great Plains and grasslands and woodlands of the Davis Mountains on the north. The state park is further situated in Brewster and Presidio Counties, just west of Big Bend National Park (see Figure 1).

Big Bend Ranch State Park includes approximately 26 miles of river frontage along the Rio Grande, between the town of Presidio in the west and the community of Lajitas to the east. In addition to the river, the state park contains a surprising number of other water sources for this area of the Chihuahuan Desert. More than 118 active springs are known to exist across the property, many of which feed drainages that are partially free-flowing much of the year. Tinajas (natural tanks) also provide seasonal sources of water in the park (Texas Parks and Wildlife Department 1994:5).

Six physiographic zones have been identified within Big Bend Ranch State Park (Figure 3), and have proven useful not only in describing the landscape of the park, but also in describing archeological survey areas of the park. The physiographic zones include (1) Cienega Mountains; (2) Alamito Creek - Terneros Creek lowlands; (3) Bofecillos Mountains, subdivided into Llano (a flat-lying, deep-soil site east of the main volcanic vents) and Canyonlands (the narrow, deep canyons eroded into the west, south, and east flanks of the volcanic uplands); (4) Rio Grande corridor; (5) Solitario, and ; (6) Fresno Canyon - Contrabando lowlands (Ing, et al. 1996:9-11; Texas Parks and Wildlife Department 1994:11). The Cienega Mountains (Figure 4), which are more than five kilometers (three miles) wide and stand more than 425 meters (1,394 feet) above the surrounding desert terrain, are situated near the northern edge of the Presidio Bolson and at the juncture

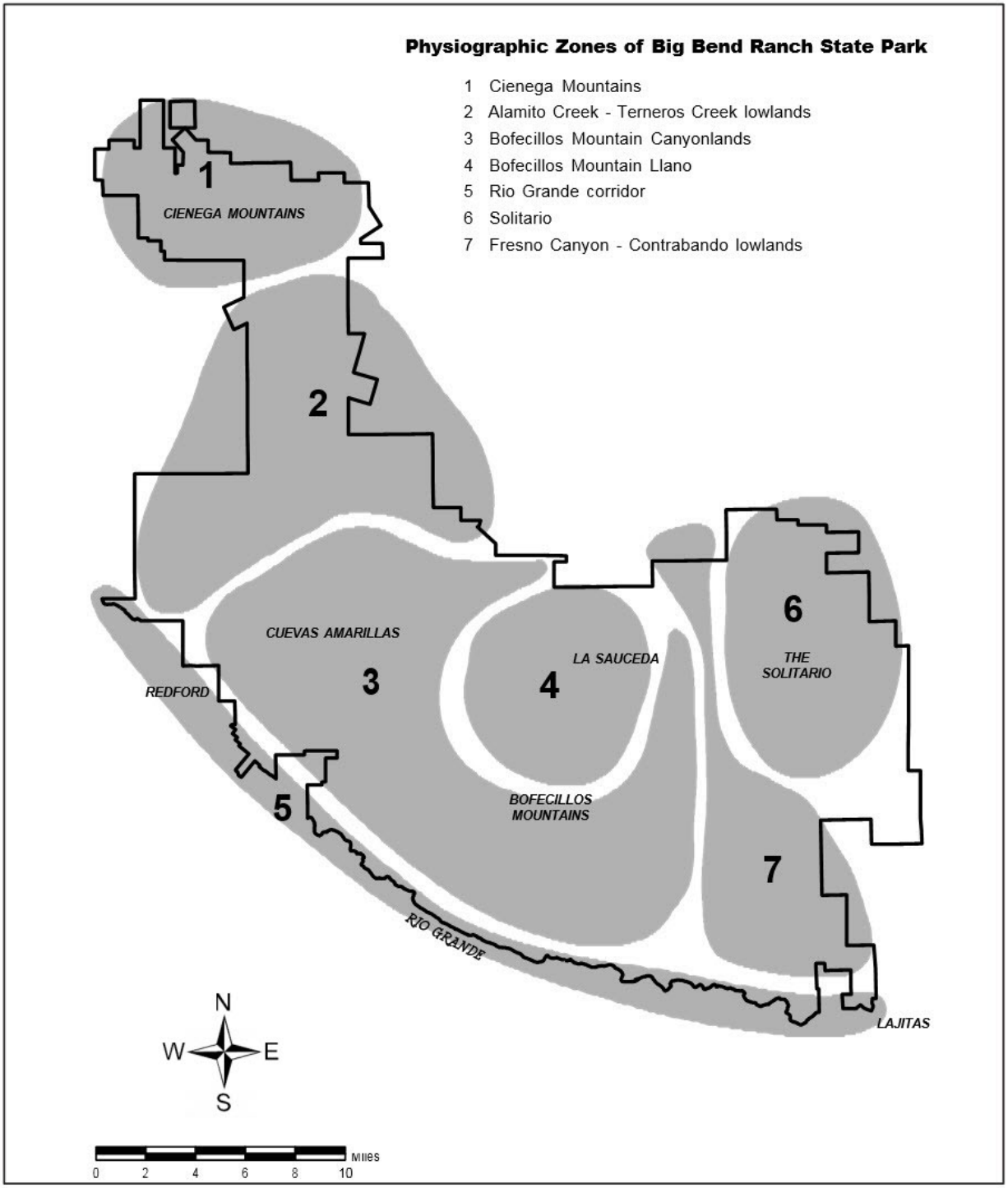


**Figure 3.** Physiographic zones of Big Bend Ranch State Park.

**Figure 4.** Photographic overview of the Cienega Mountains in the northwestern part of Big Bend Ranch State Park. Looking north.

of several major regional geological exposures (Henry 1993:42; Mallouf 1993:6). Located in the panhandle portion of Big Bend Ranch State Park, these mountains, which are a large peralkaline rhyolite lava dome, are entirely composed of Cienega Mountains Rhyolite (Ing, et al. 1996:11). This rhyolite, which is identified by a speckled blue appearance in a light-colored matrix, was important to the inhabitants of the La Junta de los Rios area (name given by Spanish explorers to the area of the Rio Grande valley where the Rio Grande and Rio Conchos come together) for the manufacture of lithic tools. Prehistoric inhabitants of the Cienega Mountains themselves, however, apparently preferred locally available high quality chert, jasper, agate and chalcedony (cf. Mallouf 1993:34), testing and utilizing cobbles that had eroded from or were exposed within outcrops of Perdiz igneous conglomerate (that originated from the Chinati caldera, located several miles to the west, millions of years ago), or quarrying fine-grained lithic materials from other rock exposures in the area. The Cienega Mountains are bounded to the west by the waters of Cienega Creek, which eventually flow southward into Alamito Creek. The Sierra Blanca dome, a miniature of the Solitario (discussed below), is located south of the mountains.

Part of the Alamito Creek - Terneros Creek lowlands are also situated in the panhandle area of Big Bend Ranch State Park (Figures 5 and 6). The wide, flat channel of Alamito Creek meanders diagonally across the east-central part of the panhandle and beyond for approximately eight miles before draining into the Rio Grande,

**Figure 5.** View of the Alamito Creek lowlands, Big Bend Ranch State Park. Looking north.

**Figure 6.** Riparian area along Terneros Creek, Big Bend Ranch State Park. Looking east.

about seven miles downstream from Presidio (Ing, et al. 1996:11). Also a wide, meandering drainage, Terneros Creek flows east to west across the north-central part of the park and the southern reaches of the panhandle, eventually emptying into the Rio Grande about 1.5 miles downstream from the confluence of Alamito Creek and the Rio Grande (Ing, et al. 1996:11). Both creeks served as transportation corridors in prehistoric and historic times, and the terraces of Alamito Creek supported Late Prehistoric La Junta farmers (Kelley, et al. 1940:73-81).

The Bofecillos Mountains physiographic zone, located near the center of Big Bend Ranch State Park (Figure 7), is the largest of the physiographic zones in the park. This zone consists of mountains and canyons in the western and southern parts of the area and a high plateau in the east. The highest elevation in the state park, the summit of Oso Mountain, is located within the Bofecillos Mountains. These mountains provide the platform for the formation of all of the major canyons within the park, and are responsible for the presence of an isolated or "perched" aquifer in the area that feeds many of the springs in the canyons (Ing, et al. 1996:9). Many of the rockshelter sites in the park are located within exposures of Rancho Viejo Tuff, which resulted from the largest ash-flow eruption of the Bofecillos Mountains over 27 million years ago (Henry 1998:44).

The Rio Grande corridor forms the southern boundary of Big Bend Ranch State Park (see Figure 3), and includes the lowest elevation in the park. Depending upon the researcher, the Rio Grande corridor includes only the river and its flood plain (Texas Parks and Wildlife Depart-

**Figure 7.** Southern Bofecillos Mountains, Big Bend Ranch State Park. Looking south.

ment 1994:11), or it may also include the deep, narrow canyons cut by arroyos draining to the river from the southern part of the Bofecillos Mountains (Ing, et al. 1996:9). These canyons are largely the result of faulting that has occurred over the last 25 million years and erosion by the Rio Grande over the last two million years. The Rio Grande did not become the river as we know it today until within the last two million years. While the trail routes discussed in this report provide a relatively good cross-section of Big Bend Ranch State Park, none of these routes fall within the Rio Grande corridor or the Solitario, discussed below.

The Solitario, located along the eastern edge of Big Bend Ranch State Park (see Figure 3), is a circular laccolithic dome and caldera approximately 13 kilometers (eight miles) in diameter. This feature was formed by igneous intrusion about 36 to 35 million years ago (Henry 1993:27), which pushed up layers of older rock buried thousands of feet beneath the surface, some of which had been deposited as early as 520-300 million years ago. The distinct sawtooth-like rim of the Solitario is formed of resistant, tilted Cretaceous limestone, creating a barrier between this ancient volcano and the surrounding land. As a result of the limited water sources within the Solitario, archeological sites in this area appear to be few in number and are generally characterized by sparse artifact deposits. Nonetheless, one of only a very few Early Paleoindian dart points recovered from within the boundaries of the present state park was discovered within the Solitario (Robert Mallouf, personal communication May 2, 2007).

Fresno and Contrabando canyons are situated in the eastern part of Big Bend Ranch State Park (Figures 8 and 9). Fresno Canyon separates the Solitario from the eastern edge of the dissected Bofecillos Volcano, and was used as a transportation corridor by prehistoric and historic travelers through the rugged terrain of the area. The Marfa-Lajitas road passed through the canyon, and was a main supply route for the ranching and mining development of the area until the early part of the twentieth century (Deal 1976:17). The Contrabando Lowlands are a broad valley of Upper Cretaceous limestones.

## Geology

Because of the intriguing geological history and mining interest in the Big Bend region, a number of geological investigations, reports, books, and maps document the geology of the region, including the state park (cf. Corry, et al. 1991; Henry 1998). The reader is directed to these references for detailed information about the geology of the park. Generally speaking, however, the landscape of Big Bend Ranch State Park reflects over 500 million years (Ma) of geologic history, marked by remnants of a former mountain range (the Quachitas), ancient seabeds, lava flows, extinct volcanoes and a rifted crust. As summarized by Henry (1998:3), major geologic events in the area of Big Bend Ranch State Park included: 1) deposition of a thick sequence of marine sedimentary rocks during the Paleozoic era, which extended from 570 Ma to 245 Ma; 2) folding and faulting of these rocks during an intense episode of mountain building near the end of the Paleozoic; 3) deposition of limestone and shale during the Cretaceous period, which lasted from 144 Ma to 66.4 Ma; 4) folding and faulting during another mountain building episode in the early Tertiary period, beginning 66.4 Ma; 5) formation of the Solitario dome in the Oligocene epoch (36.6 to 23.7 Ma) during some of the earliest volcanic activity within present-day Big Bend Ranch State Park; 6) continued volcanism during several episodes in the Oligocene and Miocene (23.7 to 5.3 Ma); and 7) faulting of the Basin and Range province beginning in the Miocene and continuing today.

**Figure 8.** Contrabando Canyon at Contrabando Waterhole, Big Bend Ranch State Park. Looking southeast.

Plateaus, mesas, steep-walled canyons, and more recent mountains (the Bofecillos Mountains and the Cienega Mountains) dominate the vistas of the state park. The park's most famous geologic feature, the Solitario, contains some of the largest and most symmetrical molten-rock domes known in the world and serves as a window to the geologic past, revealing rocks from the ancient Quachitas, mountains that have otherwise disappeared from the surface of the earth.

### Soils

The Natural Resource Conservation Service has recently completed soil surveys for Brewster and Presidio Counties, including Big Bend Ranch State Park. According to the Natural Resource Conservation Service, the majority of the state park is included within the Lajitas-Rock Outcrop-Chamberino soil association (NRCS 2011). The Boracho-Mitre-Limpia soil association is limited to the northern portion of the panhandle area of the park. Delnorte-Canutio-Nickel soils are present in the northeastern panhandle area and in the southwest part of the park. The Solitario, located in the northeast part of Big Bend Ranch State Park, contains Tencee-Reakor-Upton soils. Other soils included in the eastern part of the park include Lozier-Rock Outcrop-Upton soils, Mariscal-Rock Outcrop-Upton soils, and a small area of Chamberino-Chilicotal-Monterosa soils.

**Figure 9.** Survey Team Members in Fresno Canyon near Fresno Cascades, Big Bend Ranch State Park. Looking southeast.

Soil studies by Milner (2003) showed that the soils across much of Big Bend Ranch State Park are shallow to very shallow and contain a high volume of rock fragments. Generally, these soils lack water holding capacity and contain minimal organic matter. Based on the nature of soils within the state park, evidence of most archeological sites in the area should be apparent on the ground surface. However, it is possible that some sites may be buried by alluvial or colluvial deposits, depending on exactly where the site is situated on the landscape.

### Climate

The northeastern portion of the Chihuahuan biotic province, within which Big Bend Ranch State Park is located, is an arid region characterized by an average annual precipitation of 25-37 centimeters (10-12 inches) - much of which falls during the monsoonal season from July to October - and an evaporation rate of 230 centimeters (90 inches). Weather records from nearby Presidio, Texas indicate mean temperatures of 49.8 degrees Fahrenheit in January and 86.5 degrees Fahrenheit in July for that area. Temperatures in the Bofecillos uplands, which are about 609 meters (2,000 feet) higher in elevation than Presidio, probably average slightly lower. Nonetheless, the entire area can be characterized as a hot desert. Summer daytime temperatures often exceed 100 degrees Fahrenheit, followed by cool nights in the 60s. Winters are much more temperate, with warm

days and cool to cold nights. Light snow occurs almost every winter, but such weather seldom persists for more than a few hours.

### Flora and Fauna

Big Bend Ranch State Park is situated in the Chihuahuan biological province (Blair 1950). More specifically, the park is within the Trans-Pecos Vegetational Area (Hatch, et al. 1990). The flora and fauna of the area are represented by a wide range of species due to the high diversity present in the northern Chihuahuan Desert. The natural plant communities within the park include mixed desert scrub, desert grassland, riparian and open juniper woodland. The mixed desert scrub is by far the most widespread of these communities and has replaced the once dominant desert grasslands. The dominant plant in many areas is creosotebush, although many other species are present. The open juniper woodlands are only found in the uppermost elevations in the park. Available plants that may have been harvested for their nutritional and/or medicinal value include sotol, lechuguilla, allthorn, green condalia, Mexican buckeye, prickly pear, pitaya, tasajillo, creosote bush, yellow trumpet flower, fourwing saltbush, tumbleweed, canyon grape, tall wild buckwheat, catclaw, viscid acacia, romer acacia, senna, mesquite, screwbean mesquite, wislizenus senna, globemallow, spiny hackberry, netleaf hackberry, ocotillo, jimson weed, fiddleleaf tobacco, trompillo, western soapberry, croton, candelilla, winged spurge, desert yaupon, littleleaf sumac, white sage, gumhead, oreganillo, willow, yewleaf willow, and Arizona cottonwood (Beene 1994:Appendix IV).

Like the flora of the park, the fauna of the area are also varied, especially the mammalian and herpetofauna (amphibian and reptile) species. There have been 48 species of mammals documented in the park, including 16 species of bats. The herpetofauna includes at least 30 species of snakes alone. There have also been over 300 species of birds reported from the park and the immediate vicinity. Evidence from archeological sites on the state property indicates that deer, rabbit, rodents, turtles, lizards, and snakes were utilized by Native American inhabitants of the area (Beene 1994).

### Paleoenvironment

The environment in what is now the northern Chihuahuan Desert during much of the Paleoindian period as presently known (12,000 to 8,000 years before present [BP]), was cooler and wetter than today, and forest and woodland species flourished at much lower elevations than at present (Ing, et al. 1996:25). Packrat midden research has indicated that perhaps as recently as about 11,470 years ago, xeric woodlands with pinyon pine, juniper, and Hinckley oak were located as low as 600 meters elevation (1,968 feet AMSL) in Maravillas Canyon, within present-day Big Bend National Park (Van Devender, et al. 1978:289). This represents a “pluvial” lowering of the pinyon-juniper-oak woodland zone by 800 meters (2,625 feet) from its present-day elevation (Wells 1966:970). These late Pleistocene woodlands, or at least portions of them, occurred in association with lechuguilla and althorn (Van Devender 1986:99). Below the wooded elevations, grassland savannah communities were present during this time.

After 11,500 years ago, a xeric oak-juniper woodland, without pinyon, persisted until sometime after 9,870 years ago (Van Devender, et al. 1987:332). Following the disappearance of oak and juniper from the woodland areas, silver wolfberry and Chihuahuan crucifixion thorn were key plants in these areas, followed by a more xeric desert scrub after 8,560 years ago (Van Devender, et al. 1987:332). Based on the presence of lagged carbonate nodules dat-

ing to 9,000 years ago (Monger 1993; Monger and Buck 1995), the gradual increase in aridity, as evidenced by these changes in vegetation, appears to have been accompanied during its initial stages by a major erosional event in the region.

By about 8,000 years ago, the Chihuahuan Desert plant communities had reached their northern limits (Van Devender 1977; Van Devender, et al. 1978:298). After about 4,330 years ago, except for a brief interval about 3,000 years ago (Labadie 1993:9) and perhaps other shorter intervals since about A.D. 1250 (Cloud 2004:155; Mauldin 1995; Miller 1996), modern environmental conditions (i.e. warm and dry conditions) were firmly established across the Chihuahuan Desert (Van Devender 1990; Van Devender, et al. 1987:332). These modern environmental conditions apparently included, and continue to include extended periods of drought. Erosional evidence from the Black Cave site (41VV76) and the Devil's Mouth site (41VV188) in the Lower Pecos region indicates that a widespread drought occurred in that region, and presumably in surrounding areas, sometime during the Middle Archaic period (Labadie 1993:9; Sorrow 1968:65; Turpin 1982), between about 5,500 to 3,200 years ago. This drought ended by at least 2,800 to 3,000 years ago, when the region experienced a short period of moister, cooler climatic conditions (Labadie 1993:9; Sorrow 1968:65-68). This change in climate, though relatively brief, was of sufficient duration to temporarily allow the advancement of grasslands, and the herd animals that they supported, in the Lower Pecos and probably in the Big Bend. Warmer, drier conditions did eventually return to the region, causing a return of more xeric vegetation.

Since the return to a modern xeric environment, there have been cycles of cooler, wetter conditions in the region. According to Mauldin (1995) and Miller (1996), brief intervals of more extensive rainfall occurred between A.D. 450 and 1950, at least in the western Trans-Pecos. Using tree-ring sequences and historic precipitation and temperature records, Mauldin identified these intervals of generally higher precipitation, and greater stability in climate, as occurring between A.D. 500-700, 1000-1300, and 1550- 1950 (Mauldin 1995). In the Big Bend, based on analyses of phytoliths recovered from the Arroyo de la Presa site (41PS800) in Presidio County, there appears to have been a brief period of slightly cooler and possibly wetter conditions about A.D. 1250 (Cloud 2004:152-155). These conditions at the Arroyo de la Presa site were entirely reversed by about A.D. 1420 (Cloud 2004:155).

Despite the establishment of modern xeric conditions in the Big Bend region over 4,000 years ago, the prevalence of some of the desert scrub plants seen today, such as mesquite and creosote, is generally thought to have resulted from the introduction of livestock into the region in the latter part of the 1800s, and the subsequent overgrazing that occurred. The impact to the land was made worse by long periods of drought. Despite the aforementioned findings by Cloud (2004:152-155), Mauldin (1995), and Miller (1996) of periods of generally higher precipitation in the western Trans-Pecos and the Big Bend between 1550 and 1950, long periods of drought have been documented historically in these regions and surrounding areas, including a drought in northern Mexico between 1640 and 1645, a drought in the Lower Pecos in the 1880s (Labadie 1993:2), and droughts in the Big Bend in the 1890s, 1930s, and 1950s. Many ranching endeavors in the region failed during these periods of drought (Miller and Kenmotsu 2004:208).

# Chapter 3
# Cultural Context

Tim Roberts

## PREHISTORIC OCCUPATION CHRONOLOGY

### Paleoindian Tradition

The Paleoindian Tradition, presently the earliest well-defined cultural tradition in North America, appears to extend from approximately 12,000 to 8,000 years before present (BP) in the Trans-Pecos region of west Texas (Mallouf 1993:7; Miller and Kenmotsu 2004:212), but this date range could change as more chronometric dates become available from contexts that have good association with Paleoindian material. This tradition is divided into Early and Late Paleoindian stages based on projectile point forms. Early Paleoindian artifact assemblages (12,000–9,400 BP) include fluted style projectile points, while Late Paleoindian (9,400–8,000 BP) assemblages include unfluted lanceolate points, typically with collateral flaking and basal/shoulder grinding. Further subdivision of the Paleoindian Tradition into the Clovis complex (12,000–10,000 BP), Folsom complex (10,000–9,400 BP), and the Plano/Cody complexes (9,400–8,000 BP) has been accomplished based on functional and stylistic differences in the tool kits of these groups (Miller and Kenmotsu 2004:212). These differences in artifact traits may reflect changing hunting and settlement adaptations.

Although these early inhabitants of the Western Hemisphere were probably subsistence generalists (Brown and Anthony 2000:81; Collins 1995:381; Sollberger and Hester 1972:326; Stanford 1991), Paleoindians were at least somewhat dependent upon hunting the megafauna of the Late Wisconsinan glacial age, such as Columbian mammoth (*Mammuthus columbi*) and giant bison (*Bison antiquus*) (Dibble and Lorraine 1968; Frison 1978; Judge 1973; Suhm et al. 1954:16; Weir 1976:120). These people traveled in small nomadic bands, camping in areas where good lithic materials could be procured for tool manufacture and where permanent water sources attracted game (Mallouf 2000:6).

As discussed in Chapter 2 of this report, the environment in what is now the northern Chihuahuan Desert during much of the Paleoindian period was cooler and wetter than today, and forest and woodland species flourished at much lower elevations than at present (Ing et al. 1996:25).

While evidence of the earliest Paleoindians—the Clovis—is known from at least one site in the Lake Amistad area near Del Rio, Texas (Greer 1968), and possibly from the Chispa site, located within a north- south trending basin (Lobo Valley) near Van Horn, Texas (Lindsay 1969), it is limited to a handful of surface finds in the Big Bend region. In 1970, Campbell reported finding only one Clovis point from over 600 sites that he recorded in Big Bend National Park (BBNP) at that time (Campbell 1970). By 1995, only two additional Clovis points had been reported in the Big Bend region, both of which were recovered from Brewster

**Table 2.** Summary of cultural traditions/periods at BBRSP.

| Cultural Period | Cultural Phase | Years BP | Environmental Conditions | Comments |
|---|---|---|---|---|
| Historic | Presidio | 125 – 0 | Modern environment with generally cooler and wetter climate, ending roughly 125 BP | This period includes all archeological sites within BBRSP that date since 1535. In 1535, the first non-native people reached La Junta de los Rios. Site types include ranchsteads and locations of various ranching activities, mines and mining camps, candelilla wax factories, Historic Indian encampments, and others. |
| | Alamito | 245 – 125 | | |
| | Conchos | 322 – 245 | | |
| | Concepcion | 600 – 322 | | |
| Late Prehistoric | Concepcion | 600 – 322 | Modern environment | This cultural tradition is characterized by the appearance of the bow and arrow, the manufacture of pottery, the development of agriculture, and the establishment of villages in parts of the Trans-Pecos that were conducive to agricultural practices, including La Junta de los Rios. |
| | Cielo complex | 675 – 322 | | |
| | La Junta | 800 – 600 | | |
| | Livermore | 1,200 – 800 | | |
| Late Archaic | Formerly known as the Chisos focus of the Big Bend Cave aspect (Kelley, et al. 1940:27-29) | 2,500 – 1,000 | Modern environment | Site types are similar to those of the previous period. Diagnostics include Ensor, Palmillas, Paisano, Frio, Edgewood, Ellis and Darl dart points. Central Texas dart point styles, including Marshall and Montell points, appear in the Trans-Pecos during the late Middle Archaic or early Late Archaic period. |
| Middle Archaic | Formerly known as the Pecos River focus of the Big Bend Cave aspect (Kelley, et al. 1940:23-27) | 5,000 – 2,500 | Modern environment | Sites, identified by the presence of Langtry, Val Verde, Shumla, Marcos, Almagre, Williams, Conejo, Lange, Marshall, and/or Tortugas projectile points, include burned rock middens, burned rock clusters, hearth fields, lithic scatters, quarries, rockshelters, caves and pictographs. These sites are located across a wide variety of landforms, including high mountain saddles, ridgetops, and canyon bottom terraces. |

**Table 2.** Concluded.

| Cultural Period | Cultural Phase | Years BP | Environmental Conditions | Comments |
|---|---|---|---|---|
| Early Archaic | Formerly known as the Pecos River focus of the Big Bend Cave aspect (Kelley, et al. 1940:23-27) | 8,000 – 5,000 | By about 8,000 BP, the Chihuahuan Desert communities had reached their northern limits, and xeric woodlands retreated to higher elevations; severe drought of the Altithermal climatic episode occurred between 7,600 to 5,000 BP | A few Martindale and Pandale points have been recovered from sites within BBRSP. Site types include rockshelters/caves, hearth fields, middens, and lithic scatters. Sites from this period tend to occur in the lower basin and foothill zones; sites in BBRSP are especially common in creekside locales on gravel terraces. |
| Late Paleoindian | Plano/Cody complex | 9,400 – 8,000 | Gradual increase in aridity, with brief mesic intervals. | At least two Golondrina dart points and one Angostura dart point have been recovered from BBRSP as isolated finds. |
| Early Paleoindian | Folsom complex | 9,400 – 10,000 | Cooler and wetter than today; forest and woodland species flourished at much lower elevations than at present. | A few Early Paleoindian dart points have been recovered from BBRSP. |
| | Clovis complex | 10,000 – 12,000 | | |

County (Meltzer 1986; Meltzer and Bever 1995). More recently, Mallouf and Seebach (2006:125) documented the recovery of two more Clovis points from Brewster County, one of which was recovered in the vicinity of Elephant Mountain. An anonymous collector also recently (2012) reported finding a Clovis point in Jeff Davis County, on the northern fringe of the Big Bend region. No other Clovis material is known to have been found in the Big Bend region prior to the present investigation.

Evidence of the subsequent Folsom culture, which dates to about 10,000 BP, is somewhat more prevalent in the region (Lindsay 1969; Mallouf and Seebach 2006:126; Suhm et al. 1962). Excavations at the aforementioned Chispa site produced 108 Folsom points (Lindsay 1969; Seebach 2004, 2005). Folsom, as well as Plainview dart points have been recovered from Bonfire Shelter in the Lower Pecos region, near Langtry, Texas (Turpin 1991). Closer to the Big Bend, a possible unfinished Folsom point was recovered from the surface of a lithic scatter during the Natural Area Survey of the Chinati Mountains in the mid-1970s (Greer et al. 1980:22). More recently, two Folsom point fragments were discovered in an oak savanna setting near Fort Davis, Texas (Center for Big Bend Studies 2000:14; Mallouf 2000:6; Dennis J. Miller, personal communication May 3, 2000). Other recently documented Folsom artifacts include two preforms from Presidio County, two preforms from Jeff Davis County, and one point fragment from Brewster County (Mallouf and Seebach 2006:126); the point fragment from Brewster County was collected from the vicinity of the Solitario prior to the establishment of BBRSP (Robert Mallouf, personal communication May 2, 2007). On rare occasions, Folsom points have also been observed in private collections on the Mexican side of the Rio Grande in the Big Bend region (Aveleyra 1964:388; Krone 1975:15); unfortunately, few details exist regarding these specimens.

Marmaduke and Whitsett (1975) discovered Late Paleoindian projectile points, including Meserve, Plainview and Golondrina-Barber points, at two sites in the Davis Mountains, Jeff Davis County, during their survey of the Mount Livermore and Sawtooth Mountain area. In addition to diagnostic projectile points, numerous pieces of chipped stone debitage and debris were also recovered from these sites. At least one Angostura-like dart point and four Plainview points have been found in BBNP (Campbell 1970; Mallouf and Wulfkuhle 1989), and one Angostura dart point and two Golondrina-Barber dart points have been previously reported from BBRSP (Ing et al. 1996:26).

Kelly (1982) has suggested that Plainview points were designed as deeply penetrating projectiles for killing large animals such as bison, while the more resistant shape of Golondrina-Barber points made them better for killing medium-sized animals and butchering. This proposed multi-purpose use of Golondrina-Barber points has since been confirmed through use-wear analysis (Kay 1998). Perhaps the presence of Plainview points at BBNP is an indicator that the environment in that area supported large game animals to some degree during the Paleoindian period, while the absence of such points within BBRSP, and the presence of Golondrina-Barber points in this area suggesst that medium-sized game was more prevalent in the vicinity of what is now the state park.

Regardless, there is sufficient evidence to suggest that Paleoindian groups were knowledgeable about the available resources in the Big Bend region, but that these resources were apparently never attractive enough to draw large numbers of these early inhabitants away from the plains, where the environment was perhaps generally better suited to their subsistence strategies.

## Archaic Tradition

The Archaic Tradition spans a period from about 8,000 to 1,200 BP, and has been divided into the Early (8,000–5,000 BP), Middle (5,000–2,500 BP) and Late (2,500–1,000 BP) Archaic periods based on gradual changes in settlement patterns, population sizes and technology. In addition to Early, Middle and Late Archaic periods, a Transitional Archaic period has been defined by some researchers in west Texas to identify the lengthy period of gradual change between the Late Archaic and Late Prehistoric periods.

In general, the Archaic Tradition is one in which specialized technologies were utilized in more diverse environmental settings than the previous Paleoindian Tradition (Jennings 1974; Willey and Phillips 1958:107). This is reflected in the variety of projectile point styles and other tool types produced during this period, and the distribution of Archaic sites across the landscape (Story 1985; Weir 1976). Archaic groups depended on the seasonal or fortuitous availability of potential food sources from a wide range of environmental niches (Mallouf 1985:115; Marmaduke and Whitsett 1975). There was a growing dependence on the gathering of plant materials and less reliance on the hunting of large game animals (Prewitt 1981:74). While Archaic populations remained highly mobile, there was a gradual trend toward decreasing group mobility (Charles 1994:34). Site sizes and distributions during this time suggest a gradual increase in Archaic populations, which may have resulted in increasingly restricted territorial ranges (Mallouf 1985:115; Wulfkuhle 1993:4–5).

With the possible exception of the last 400 to 500 years of the Archaic period, climatic data from this period reveals a gradual, sometimes interrupted, transition from the moister conditions of the previous Paleoindian period to more arid conditions. The period between 6,600 and 6,000 BP, known as the Altithermal climatic period, was particularly dry. Although the Archaic period is generally well represented in west Texas (Cloud and Sanchez 1993:8), there are strong indications that some areas of the region were virtually abandoned for much of the Altithermal period (Meltzer 1991:261).

Mallouf (1981) suggests that the last 500 years of the Archaic Tradition were characterized by an interlude of increased moisture and widespread stream erosion; however, Charles (1994:218) proposes that climatic conditions across the Trans-Pecos were similar to those of today by 1,400 BP. Nonetheless, the woodlands in the west Texas region appear to have maintained a gradual retreat to higher elevations during the Archaic period, allowing for the gradual establishment of desert biomes (Mallouf 1981; Van Devender 1990; Wells 1977).

The Early Archaic period remains largely undefined across the Trans-Pecos. Meserve projectile points have been considered by some researchers in the Trans-Pecos to be transitional between the Late Paleoindian and Early Archaic periods (Suhm et al. 1962), and other researchers have suggested that Bulverde points are diagnostic of the latter half of the Early Archaic period (Charles 1994:34). Nonetheless, recognition of Early Archaic components in the Trans-Pecos is based almost entirely upon cross-correlation of regional projectile point sequences with those of the Lower-Pecos and Central Texas regions (Mallouf 1985:101). As a result, the presence of corner-notched and expanding-stemmed dart point styles, such as La Jita, Uvalde, Baker, Martindale, Bandy, or Early Barbed projectile points, and later, shouldered styles such as Pandale, Zorra, and Bulverde, is generally considered indicative of Early Archaic occupations in the Trans-Pecos (Sanchez 1999:32).

Almost nothing is known of other tool forms associated with the Early Archaic in the region. Evidence from Reagan Canyon, Brewster County, for the later part of the Early Archaic suggests an association of concave-base knives and various scraping implements with Pandale points (Kelley 1963). In addition, unifacial and bifacial Clear Fork gouges may be associated with Early Archaic occupation in the Big Bend area (Campbell 1970). In the Lower-Pecos, Early Archaic components are characterized by the appearance of basketry (Andrews and Adovasio 1980), cordage and sandals (Shafer and Bryant 1977:63), and painted pebbles (Parsons 1965:16).

A few Early Archaic Martindale and Pandale points have been recovered from sites within BBRSP (Ing et al. 1996:104; Sanchez 1999:59). Additional Early Archaic sites have been identified within the nearby Chinati Mountains (Greer et al. 1980), BBNP (Campbell 1970), the Lower Pecos region (Shafer and Bryant 1977), and adjacent parts of northern Mexico (Taylor 1966). Early Archaic site types include rockshelters, caves, hearth fields, middens, and lithic scatters. Sites from this period tend to occur in the lower basin and foothill zones (Sanchez 1999:33). Early Archaic inhabitants in the present state park area appear to have especially favored creekside locales on gravel terraces (Ing et al. 1996:171).

Compared to the Early Archaic period, the Middle Archaic period is somewhat better represented in the region. In fact, the increased density of sites across a wider range of environments during this time, and an increase in new tool types, suggests that there was a substantial growth in population (Mallouf 1985:109, 112; Sanchez 1999:33). Middle Archaic sites, identified by the presence of Langtry, Val Verde, Shumla, Marcos, Almagre, Williams, Conejo, Lange, Marshall, and/or Tortugas projectile points, include burned rock middens, burned rock clusters, hearthfields, lithic scatters, quarries, rockshelters, caves and pictographs. Some dry rockshelters and caves in the Trans-Pecos have been especially productive of Middle Archaic cultural material, revealing basketry, sandals, cordage, matting, netting, pointed sticks, fending sticks, dart foreshafts, stone and shell beads, antler flaking tools, grinding slabs, abraders, bone awls, manos, retouched flakes, scraping implements, cores, and hammerstones (Mallouf 1985:109). Middle Archaic sites are located across a wide variety of landforms, including high mountain saddles, ridgetops, and canyon bottom terraces (Boisvert 1980; Katz 1978; Mallouf 1985; Marmaduke and Whitsett 1975).

Late Archaic sites appear to be much more prevalent over the entire Trans-Pecos than do earlier sites. As a result, Late Archaic sites have been the focus of more research. Late Archaic site types are similar to those of the Middle Archaic period. Material from these sites can include side and endscrapers, perforators, a variety of manos and metates, hammerstones, abraders, bone awls, pointed sticks, split-yucca fireboards, fire drills, atlatls, pouches and blankets of rabbit fur and sewed skins, throwing sticks, wooden tongs and scoops, basketry, matting, sandals, gourd vessels, and other fiber items (Mallouf 1985:117). Late Archaic diagnostics include Ensor, Palmillas, Paisano, Frio, Edgewood, Ellis and Darl dart points. Central Texas dart point styles, including Marshall and Montell points, began to appear in the Trans-Pecos during the late Middle Archaic or early Late Archaic period (Carpenter et al. 1996:89; Mallouf 1985:116). Migratory bison hunters probably introduced these point types into the Trans-Pecos as they followed bison herds into the area from Central Texas (Carpenter et al. 1996:89; Hester 1988:59–61; Mallouf 1985:116). Bison herds may have been drawn into the Trans-Pecos by improving grazing conditions brought about by an increase in moisture during the first half of the Late Archaic period (Mallouf 1985:116).

Kelley, Campbell, and Lehmer (1940:27–29) termed the Late Archaic period the Chisos focus (now 'phase') in the Big Bend area. Chisos phase sites are characterized by the presence of ring middens, distinctive side- and corner-notched dart points, and basketry and other perishable items found in dry shelters. This period reflects the culmination of a subsistence economy keenly adapted to both hunting and gathering, including the intense use of desert succulents (Ing et al. 1996:26; Mallouf 1985).

Technological innovations such as the development of the bow and arrow and pottery are used to mark the beginning of the Late Prehistoric Tradition in the eastern Trans-Pecos, but the change from a Late Archaic to Late Prehistoric way of life was actually very gradual in the eastern Trans-Pecos (as opposed to hunter-gatherer groups in the western Trans-Pecos that quickly adopted the material culture and ideologies of nearby Jornada Mogollon agriculturalists [Mallouf 1985:127]) and there was considerable overlap between the two cultural traditions. As previously indicated, the term Transitional Archaic is used by some researchers in west Texas to identify this period of gradual change (Katz 1978; Katz and Katz 1974; Mallouf 1985:28, 34). Hester (1988:61) considers Ensor, Figueroa, Frio and Paisano points to be diagnostic of the Transitional Archaic period in the region. No Transitional Archaic sites have been previously documented as such within BBRSP.

**Late Prehistoric Tradition**

In the Trans-Pecos, the Late Prehistoric Tradition extended from about 1,200 to 470 BP. This cultural tradition is characterized by the adoption of the bow and arrow across the region. Other hallmarks of the Late Prehistoric Tradition are manufacture of pottery, development of agriculture, and establishment of villages in areas conducive to agricultural practices (Ing et al 1996:27; Sanchez 1999:36). Agricultural areas included the western Trans-Pecos, northern Mexico and various small sections of land throughout the region (Beene 1994:26). One of these areas, known historically as "La Junta de los Rios", is located at the confluence of the Rio Conchos and the Rio Grande, near present-day Presidio, Texas. Late Prehistoric cultures in this area were defined by archeologists in the first half of the twentieth century as part of the Bravo Valley Aspect, a cultural complex identified by the presence of permanent houses and villages, agriculture, pottery, and a variety of shell, bone, and stone artifacts. Most regional archeologists have since abandoned the Bravo Valley Aspect cultural concept (Ing et al. 1996:26), but this cultural phenomenon has been subdivided into three foci (Kelley et al. 1940) or phases (Mallouf 1992) as they are now called. These subdivisions include the Livermore phase (1,200–800 BP), the La Junta phase (800–600 BP), and the Concepcion phase (600–320 BP).

Livermore sites, identified by the presence of distinctive Livermore arrowpoints, are found throughout most of the Trans-Pecos, and far northern Chihuahua and Coahuila, Mexico. The densest occurrences of these sites, however, occur in the Davis Mountains and in the Lobo Valley near Van Horn, Texas (Mallouf 1992). Dates associated with the Concepcion phase, which remains poorly defined, overlap both the Late Prehistoric and the Historic periods. The establishment of missions at La Junta in 1683 marked the formal end of the Concepcion phase and the beginning of the historic Conchos phase (described in following paragraphs) (Ohl and Cloud 2001:33). The La Junta phase is characterized by rectangular pithouses. As described by Mallouf (1992), La Junta phase inhabitants were indigenous hunters and gatherers who adopted a semi-sedentary lifestyle but never fully made the transition to an agricultural-based economy.

One Late Prehistoric/Historic cultural manifestation that has been more recently defined is the Cielo complex (approximately A.D. 1330 to 1680), a nomadic culture in the Big Bend region that was coeval with the Indians of La Junta and maintained a symbiotic trade relationship with these semi-sedentary groups (Ing et al. 1996:27). As described by Ing et al. (1996:20), base camps and villages of the Cielo complex are often situated on elevated landforms. Most base camps consist of two to nine circular to oval stacked- stone enclosures with diameters of 2.7 to 3.4 meters (8.9 to 11.2 feet). In the La Junta area, Cielo complex villages may contain 50 or more of these enclosures. Other cultural features that can be associated with the enclosures include small hearths, ash pits, refuse middens, stone cairns, linear stone alignments, stone- lined cysts, stone "storage" platforms, incipient ring middens, bedrock mortars and cupules, and possible burials. Artifact assemblages may include Perdiz, basal-notched, and a few side-notched arrow points, arrow point preforms, flake drills, unifacial scrapers, beveled knives, conical cores, manos and metates, bone rasps, oval pestles, bone and stone beads, small turquoise beads, Olivella sp. shell beads, and a variety of expedient lithic tools. Pottery is not found on Cielo sites (Mallouf 1992, 1995).

Late Prehistoric sites in the region are often situated on elevated and unusual landforms, foothills, or in rockshelters (Mallouf 1985:143), and are more numerous than the preceding periods. The increase in the number of sites during this time period may reflect a continued increase in population from the previous Archaic period, or increasing mobility among nomadic groups (Mallouf 1985). Nonetheless, the Late Prehistoric Tradition remained largely the same as the preceding Archaic Tradition. As summarized by Mallouf (1985:150), "only those aspects of sedentary existence which enhanced an already entrenched and successful nomadic hunting-gathering adaptation were actually incorporated." This cultural continuum between Archaic and Late Prehistoric occupations is reflected in the artifact assemblages recovered from dry rockshelters throughout the Trans-Pecos. Shared artifact types include basketry, matting, sandals, throwing sticks, rabbit fur robes, cordage, netting and various other items (Sanchez 1999:36).

## HISTORIC OCCUPATION CHRONOLOGY

In 1535, Alvaro Nuñez Cabeza de Vaca and the remaining three surviving members of the ill-fated Narvaez Entrada became the first non-native people to reach La Junta de Los Rios. Subsequent Spanish entradas, including the Rodriguez Expedition of 1581 and the Espejo Expedition of 1582-1583, passed through the area, but it was not until 1683 that Spanish missions were established at La Junta (Shipman 1938).

As discussed, the establishment of missions at La Junta marked the formal end of the Concepcion phase and the beginning of the Conchos phase among the indigenous population of the La Junta area. The Conchos phase, which lasted until 1760 (Kelley 1986:84), "represents the period of Spanish acculturation of the Indian villages." (Kelley et al. 1940:39). During this time, the rectangular pithouses discussed for the Late Prehistoric La Junta phase were still being constructed and lithic assemblages remained largely unchanged from that time. The Conchos phase, however, is easily distinguished from Late Prehistoric occupations by the presence of European or Mexican artifacts in the archeological record (Kelley et al. 1940:36–37). Native American pottery types from Conchos phase sites include Conchos Red-on-Brown, Pulicos Red-on-Brown, and occasionally Capote Red-on-Brown, Chinati Plain, Chinati Striated-Neck, and Chinati Neck-Banded (Kelley 1986:85; Kelley et al. 1940:37).

Accounts written by early Spanish explorers and nineteenth century Euro-American travelers and settlers provide evidence of several Native American groups in the Big Bend, including the Jumano, Apache, Comanche, Cibola, Pescado, Venado, Chinarra, Pulique, Patarabuey, Cholome, and Suma tribes. While those tribes that were situated along the Rio Grande had become at least semi-sedentary, others (i.e., the Apache, Comanche, and possibly the Jumano) were more nomadic. Little is known about the eventual disappearance or assimilation of many of the early historic tribes in the region, but it appears that by the 1720s the Jumano had been assimilated by one or more of the Apache groups and were living and raiding with the Apaches (Cloud and Sanchez 1993: 10; Hickerson 1994:202; Newcomb 1961:233). Tunnell and Madrid (1992:77) suggest that "the remaining Indians of the villages along the Rio Grande probably were assimilated into the larger Mexican population along the river."

The Apaches and Comanches were far ranging in their travels, especially after acquisition of horses that were reintroduced to North America with the arrival of the Spanish. In the early 1700s, both the Apache and Comanche traversed the Big Bend country (Ohl and Cloud 2001:34; Tunnell and Madrid 1992:77). Archeological sites attributable to these nomadic tribes are difficult to identify, but generally consist of small ephemeral lithic scatters, oftentimes with no diagnostic items. When found, Garza/Soto arrow points mark the intrusion of Plains Apache into west Texas about 1650 Occasionally, arrow points are found that have been fashioned out of metal barrel hoops or the bottoms of glass bottles that were brought into the area by non-indigenous people in the nineteenth century. Some rock imagery in the region is also attributable to the Apache.

To try to prevent raiding by the Apache and Comanche, the Spanish constructed a series of presidios, including Presidio del Norte in the vicinity of present-day Presidio, Texas. Presidio del Norte was constructed in 1759–1760 (Jones 1991:49; Kelley 1992:xv). Construction of the presidios brought an end to the mission period and to the Conchos phase.

The following Alamito phase represents changes to the Indian settlements of La Junta through both ethnic admixture and acculturation that resulted after the construction of the presidios. House styles and pottery types changed only slightly from the previous phase, but European artifacts, such as modern chinaware, glass beads, metal cartridge cases, buttons, and other materials are common on Alamito phase sites. Economic pursuits during this phase included agriculture, fishing and the gathering of wild foodstuffs (Kelley et al. 1940:37–38).

In 1821, Mexico gained its independence from Spain. After independence, Mexico opened the country to foreigners, facilitating an extensive trade with the United States. While Apaches and Comanches initially also participated in this trade, they soon turned back to raiding Hispanic ranches and missions for food, cattle, and horses (Ing et al. 1996:40).

Texas became independent from Mexico in 1836, but the Big Bend region remained under Mexican control, and title to the land in the region continued under Mexican authority (Miller 1972:9). Indian hostilities continued, and by 1838 Hispanic settlements in the northern frontier were being abandoned (Griffen 1988:271–272).

Despite the threat of Indian attacks, there was still great interest by Mexican and American entrepreneurs to develop trade between the United States and Mexico. In 1839, an expedition led by Henry Connelly, a Missouri physician and prominent Chihuahua merchant, followed an old trail between the port town

of Indianola, Texas (through San Antonio) and Chihuahua City, Mexico, seeking to open a shorter trade route than the circuitous route through St. Louis, Santa Fe, and El Paso (Ing et al. 1996:42; Ohl and Cloud 2001:34–35; Shipman 1938; Texas State Historical Association 1996a:76–77). Connelly's route, commonly referred to as the Chihuahua Trail, followed Alamito Creek through present-day Presidio County, crossing the panhandle of what is now BBRSP.

In 1845, Texas became one of the United States, and war was declared on Mexico later that same year. On February 2, 1848, the Mexican government conceded defeat and signed the Treaty of Guadalupe Hidalgo. This treaty established the Rio Grande as the boundary between the United States and Mexico along the southern Texas border.

The cessation of hostilities between Mexico and the United States saw a marked increase in the number of Americans moving into the Big Bend region. In 1848, Ben Leaton and his family moved to Fort Leaton, a large fortified adobe residential complex just east of Presidio, where they operated a trading post until Ben Leaton's death around 1851 (Today, this site is preserved as Fort Leaton State Historic Site). Other Americans, as well as Mexicans, moved into the region, establishing large ranches and farms, and facilitating the on-going trade through the area. In 1854, Fort Davis was established to protect Euro-American settlers, traders, and travelers passing through the area from Indian raids (Wooster 1990:32,43). Except for a period of abandonment during and immediately following the Civil War, Fort Davis functioned in this capacity until 1891.

After the Civil War ended in 1865, trade increased considerably in the Big Bend region. Presidio's importance as a port of trade peaked during the 1870s. As late as 1879 Presidio collected $52,899 in custom dues and El Paso collected only $797 (Applegate and Hanselka n.d.:60). In 1875, however, a hurricane wrecked the docks of Indianola; railroads connected San Antonio with the Gulf Coast in 1877, extending to El Paso in 1883, and joining El Paso with Mexico City in 1884. These developments ended any usefulness of the Chihuahua Trail (Applegate and Hanselka n.d.:60), and Presidio's heyday as a major port of trade was over. Years later, in 1930, the tracks of the Kansas City, Mexico and Orient Railroad would follow the Chihuahua Trail to Presidio, but would still fail to lift Presidio to its former glory as a port of trade.

Despite Presidio's decline as a port of trade, settlement of the Big Bend region by American ranchers and homesteaders accelerated after 1880, when the last of the Apaches, led by Victorio, were killed or driven from west Texas (Tunnell and Madrid 1992:77). Many of the historic ranches within present-day BBRSP were established in the late nineteenth century. Kelley, Campbell, and Lehmer (1940:38) refer to the period represented by the ruins of Anglo-American and Mexican-American ranches, farms, and other undertakings in the region, and the associated artifact assemblages, as the Presidio phase.

In the 1910s, the brothers Woodworth, Gus, and Gallie Bogel began buying and consolidating small ranches that had been established in the vicinity of the present park. After going bankrupt during the Great Depression, the Bogel's land holdings were in turn purchased by Mannie and Edwin Fowlkes, who continued the process of land consolidation initiated by the Bogels (Texas State Historical Association 1996b:526). When ownership of the Big Bend Ranch passed from the Fowlkes brothers in July, 1958 to Len G. (Tuffy) McCormick, it contained nearly 320,000 acres under fence (but not all under the same ownership). The ranch configuration remained essentially unchanged

through three subsequent successive owners. In July 1988, TPWD acquired controlling interest of BBRSP from Robert O. Anderson and Walter Mischer with the fee purchase of 212,528 acres, along with 3,248 acres from Arrow Investment (Texas Parks and Wildlife Department 1994:6). Subsequent acquisitions have brought the total acreage of BBRSP to roughly 315,000 acres.

While ranching and farming activities are reflected in many of the historic archeological sites and structures within the present BBRSP, other economic endeavors are also represented. In the eastern portion of the park, one can see abandoned quicksilver mines and prospects, and the crude stone huts of the former miners. Reports of the presence of quicksilver in the Big Bend region circulated for over 30 years before the first serious exploration for cinnabar was undertaken in 1884. In that year, after reportedly being shown a specimen by Juan Acista, Ignatz Kleinmann, operator of a general store in Presidio, staked a claim near what became known as California Hill near Terlingua (Tyler 1975:138). Kleinmann failed to find sufficient quantities of quicksilver to make the mine profitable, but subsequent mines in the area did very well. In 1896, the newly established Marfa and Mariposa Mining Company took up a claim, and extracted over 9,000 flasks of mercury before disbanding in 1903 (Tyler 1975:139). Quicksilver mining in the area enjoyed a short boom during World War I, but gradually played out after the war. Most production ended by World War II (Tyler 1975:141).

The remains of wax-rendering operations can also be seen in the eastern portion of BBRSP. Wax was rendered from the native candelilla plants. Some candelilla wax production still goes on in Mexico today, but most of the wax-rendering sites on BBRSP probably date to the first half of the twentieth century. Several wax factories were established in the Big Bend prior to World War I (Tyler 1975:147).

## PREVIOUS INVESTIGATIONS

The first documented archeological investigation that included portions of what is now BBRSP was an archeological reconnaissance, conducted between April 6–23, 1909, by Charles Peabody, of the Peabody Museum, Harvard University, Cambridge, Massachusetts. The route of Peabody's reconnaissance in west Texas extended south-southwest from Pecos, through Fort Davis, Marfa, Shafter, and Presidio, to Ojinaga, Mexico, then northward up Alamito Creek, and east to Alpine. Peabody's route up Alamito Creek would have taken him through the panhandle portion of the present park. Peabody said little about this particular stretch of his reconnaissance route, except to report that "evidences of work [Native American] are continuous, and almost every hilltop and ridge can be counted on to furnish specimens" (Peabody 1909).

Archeological investigations continued across the broader Big Bend region and adjacent areas between 1909 and the 1930s, but it was not until 1937 that attention was turned again to the area that now comprises BBRSP. In that year, Mr. V. J. Shiner, a United States Department of Agriculture entomologist then stationed at Presidio, reported to archeologist J. Charles Kelley, then with the University of New Mexico, the discovery of a buried archeological site five miles south of Casa Piedra, along Alamito Creek. This site, identified as the Shiner site or Shafter 6:1, is located adjacent to the panhandle area of BBRSP. Preliminary observations of the Shiner site by Kelley revealed evidence of two cultural horizons in a side arroyo (Denman Draw), including one at six to seven feet below the surface and another at 10 to 12 feet below surface. Both cultural horizons include hearth features, chipped stone deb-

itage and debris, and a few formal chipped stone tools. Exposed cultural materials on the ground surface included additional hearth features, fire-baked adobe, and several types of prehistoric pottery (Kelley et al. 1940:43).

In the summer of 1938, Kelley led excavations at the Shiner site. These investigations included exposing two pithouses, testing a third pithouse, excavating five test pits, and shaving away small sections of the southwest bank of Denman Draw. Among the artifacts recovered from the lowest cultural component at the Shiner site was a Middle Archaic Almagre dart point. The upper buried cultural component produced the Late Prehistoric pithouse features, which were rectangular in shape. No formal artifacts were recovered from within these features, but the presence of charred reed and grass in one of the pithouses indicated that the original structures were of "jacal" construction. An infant burial was recovered from beneath the floor of one of the pithouses. The skeleton was in poor condition, but was apparently flexed, head to west, facing east. Grave goods included Olivella shell beads (Kelley et al. 1940:73–76). Diagnostic artifacts recovered from the surface of the Shiner site during the 1938 investigation included an unidentified Late Archaic dart point, Late Prehistoric Livermore and Perdiz arrow points, and pottery sherds that were identified by Kelley as El Paso Polychrome, Chihuahua Polychrome, possible Villa Ahumada Polychrome, and striated brown sherds of unknown type (Kelley et al. 1940:73–76).

Although archeological investigations continued in the greater Big Bend region, investigations on what is now BBRSP languished between the 1930s and 1960s. In 1967, Miriam A. Lowrance, a professor of art at Sul Ross State University in Alpine, began revisiting and documenting known rock art sites and recording previously unknown rock art sites across the Big Bend, including a few sites on the present state park. Lowrance's work included unscaled drawings, color slides, Polaroid prints, and narrative descriptions of the rock imagery (Lowrance 1982a, 1982b, 1986a, 1986b, 1987). Comparisons by Lowrance (1974) of the Big Bend rock art with rock imagery in the adjacent Lower Pecos and western Trans-Pecos regions revealed little similarity with these other cultural areas.

Since the early 1970s, archeological investigations within the present boundaries of the state park have consisted mostly of selective, short-term surveys and reconnaissance-level investigations to assess archeological resources prior to land acquisition or development within the property. The earliest of these projects was a cursory archeological survey conducted by the General Land Office (GLO) in May 1973. This survey, which included the Solitario, upper Fresno Canyon, and Chorro Canyon (a tributary canyon of Arroyo Primero) resulted in the discovery of five sites within the Solitario, 10 sites in upper Fresno Canyon, and three sites in Chorro Canyon. Site types included rockshelters, open campsites, and historic ranches (GLO 1973; Ing et al. 1996:17; McKann 1975).

The first extensive archeological investigations in the area were conducted through the Office of the State Archeologist in 1975 as part of the interdisciplinary University of Texas Natural Area Surveys. Within the area of the park, these Natural Area Surveys focused on the Solitario (Hudson 1976a), Fresno Canyon (Hudson 1976b), Colorado Canyon (Baskin 1976a), and the Bofecillos Mountains (Baskin 1976b). The surveys included assessments of the biological, geological, and archeological resources of these natural features.

Within the Solitario, the Natural Area Survey identified 13 open campsites and 11 rockshel-

ters. No diagnostic artifacts were observed at any of these sites, but the presence of fire-cracked rock was documented at eight sites. Rock imagery was documented at one site. At the time of their documentation in 1975, two rockshelters showed evidence of vandalism, and one open campsite had been impacted by construction activities (Hudson 1976a).

The Natural Area Survey of Fresno Canyon documented 15 open campsites and seven rockshelters. Pictographs, including depictions of horses, were observed in three of the rockshelters. No diagnostic artifacts were recovered from any of the archeological sites recorded during the Natural Area Survey of Fresno Canyon. In addition to the obvious surface collecting that had occurred on the sites in this area, subsurface disturbances were evident at two sites (Hudson 1976b).

The 1975 investigation of Colorado Canyon identified 16 open campsites, 12 rockshelters, one lithic procurement site, and one historic site. As with the Solitario and Fresno Canyon, no diagnostic artifacts were recovered from any of these sites. However, hearths, fire-cracked rock, and one rock imagery site were documented during the Natural Area Survey. Eight of the sites within Colorado Canyon had evidence of subsurface disturbance (Baskin 1976a).

Nine open campsites and 19 rockshelters were identified in the Bofecillos Mountains during the Natural Area Survey. Ring middens and other midden deposits, stacked stone rings attributable to the previously discussed Cielo complex and rock imagery were among the cultural features encountered at these sites. These features and associated diagnostic artifacts indicate that these sites range in age from the Archaic period through Historic times. Approximately one-third of all the sites recorded by the Natural Area Survey in the Bofecillos Mountains had evidence of subsurface disturbance (Baskin 1976b).

Since TPWD purchased the original BBRSP property in 1988, several survey and reconnaissance level investigations have been conducted to minimize the impact of various park development projects on archeological sites, and to enhance our knowledge and interpretation of the culture history of the area (Gibbs 2004; Ohl and Cloud 2001; cf. Sanchez 1999).

Diagnostic artifacts recovered from archeological sites recorded within BBRSP span approximately the last 12,000 years, from Paleoindian period to Historic times. Prehistoric site types include open campsites, rockshelters, quarries, lithic scatters, Late Prehistoric Cielo complex sites, rock imagery sites, and special-use or ritual sites. A significant number of archeological sites on the property contain historic components, most of which are associated with former ranching, mining, or candelilla wax processing activities.

Some archeological research on what is now BBRSP prior to the current investigations has been directed towards specific sites or a certain type of site. In 1989, three archeologists with TPWD; J. David Ing, Bruce Nightengale, and Mike Davis, conducted test excavations at the Grassy Banks site (41PS443), a location between FM 170 (River Road) and the Rio Grande that was being considered for use as an overnight campsite. These archeologists soon learned that they were mistakenly working on what was then General Land Office (GLO) property; however, the land was purchased by TPWD a short time after the site testing was completed. Testing on 41PS443 consisted of ten backhoe trenches, ranging in length from 3.8 to six meters (12.5–19.7 feet), excavated into the high sandy alluvial terrace on which the site was partially situated. The trenches were the width of the 24-inch (61 centimeters)

bucket, except where trench walls collapsed, and were excavated to a depth of 1.5 to two meters (4.9–6.6 feet). In addition, a single one by one meter (3.3 by 3.3 feet) test unit was hand-excavated in order to cross-section a small hearth feature that was evident on the surface. Other hearths and lithic scatters were apparent on the surface of 41PS443, but the subsurface excavations revealed only minimal cultural material. The researchers concluded that the site was primarily a surface manifestation that had been impacted by years of artifact collecting and vehicle traffic (Ing et al. 1996:219–220).

Las Cuevas Amarillas (41PS201), a large prehistoric camp bisected by the main road in the interior of the park, was the subject of test excavations conducted by Debra Beene, a University of Texas graduate student, in 1991 and 1992 (Beene 1994). The excavations were intended to partially mitigate ongoing disturbance of the site by the presence of the road, artifact collecting, and other occasional vandalism by motorists stopping at the site. The site, located near a large spring in the Bofecillos uplands, covers approximately 59 acres and includes five rockshelters, some of which include pictographs, and ten midden areas. Beene tested seven of the middens. Material recovered during the excavations indicated that humans began to occupy the Cuevas Amarillas site on at least a semi-regular basis about 1,600 years ago, during the Late Archaic period (isolated Middle Archaic projectile points indicate that Native Americans may have passed through the area at an earlier date, but did not spend any length of time on the site). Occupation of the site intensified during the following Late Prehistoric period, from about 1,100 to 900 years ago. The presence of prehistoric pottery, including Casas Grandes Corrugated, El Paso Bi-Chrome or Polychrome, and Chinati Scored sherds, as well as turquoise, Olivella shell, and obsidian, suggested a direct association between at least the Late Prehistoric inhabitants of the Cuevas Amarillas site and the early agricultural villages of La Junta de los Rios (vicinity of present-day Presidio, Texas and Ojinaga, Mexico). The presence of bedrock mortars, burned rock middens, and ground stone artifacts at the site indicate that the collection and processing of plant foods were important activities.

In 1996, a recently dug looter's trench was observed at site 41PS322, also known as the Green Midden site. This site, which was originally recorded in 1978 by Barbara Baskin, then of Austin, and Enrique and Ruby Madrid of Redford, is located on a narrow, and relatively flat, gravel pediment extending west from FM 170 and overlooking a bend of the Rio Grande. Features on the site include a large burned rock ring midden for which the site is named, an eroded circular area of stone, two other midden deposits (probable incipient middens); several circular depressions; an elongated erosional area bounded on the west end by a U-shaped area of stone; a straight line of partially buried stones (a probable Puebloan semisubterranean room block); and a rectangular or square structure constructed of stone and adobe. The large burned rock ring midden, which was the focus of the looter's trench, was intact when the site was originally recorded, and measured approximately 19.2 meters by 18.8 meters across the outside of the feature. The feature stood 1.1 meters in height, and contained a large number of ground stone fragments (manos and metates) when originally documented. Though the recorders of the site noted in 1978 that the site had been surface collected for many years, no subsurface excavation had been observed until 1996. The looter's trench, which was subsequently examined by then TPWD archeologist J. David Ing, measured one meter wide by two meters long (north to south), and was dug into the south inside face of the ring midden. Several

other smaller holes, one located on top of a burned rock pile, and the others located near the semisubterranean room block, were also noted. Little of scientific value was gleaned during the documentation of the vandalism to 41PS322, but a fence was erected around a portion of the site to discourage access.

Professional cultural resource investigations in the park have not been limited to archeological deposits. Between 1991 and 1993, TPWD staff, the Texas Archeological Society Rock Art Task Force, and several volunteers conducted rock art recording expeditions. These expeditions documented 16 previously unrecorded pictograph sites. The pictograph figures were painted in white, black, red, orange, and yellow, and included chevrons, zigzags, meandering lines, diamond chains, triangle strings, tally marks, feathered staffs, anthropomorphs, animals and insects. Stylistically, these pictographs show cultural influences from northern Chihuahua, southern and perhaps central New Mexico, and the southern Plains (Ing et al. 1996:22–23). Archeological surveys conducted since the early 1990s have identified additional rock imagery sites. Today, including three pictograph sites recorded during the present investigations, there are a total of 29 rock imagery sites that have been identified within BBRSP.

In addition to the documentation of rock imagery sites, some limited pigment analyses have been undertaken on sites within the park. Pigment samples that had detached and fallen from the walls of 41PS114 were processed to extract and date any organic matter that might be contained in the pigment (Ilger et al. 1995:2). Unfortunately, the results of the pigment samples and the unpainted background samples that were processed for comparative purposes were essentially the same, indicating that this dating technique was of no use in this particular instance (Ing et al. 1996:88). Utilizing various technologies, other researchers also examined pigment samples from 41PS114 for the presence of “whewellite”, which can serve as a protective covering over rock imagery. Apparently, whewellite was not detected in the pigment specimens, but loric acid (probably animal fat) was identified in the pigment or its binder (Ing et al. 1996:88).

Other research pertinent to the cultural resources of BBRSP includes a historic chronology of the general area of the Big Bend, including what is now the state park, compiled by Sheron Smith-Savage (1995). Futhermore, there have been extensive reviews of land ownership records (Brandimarte 1990; Smith-Savage 1991–1995) and compilation of genealogical charts for those families that owned land within what is now BBRSP (Smith-Savage 1990–1991). In addition, a gazetteer of named natural and cultural features at BBRSP was compiled for interpretation and management purposes (Williams 1989).

In 1998, TPWD collaborated with the Center for Big Bend Studies on an oral history project, in an effort to gather and preserve historical information from people closely associated with what is now Big Bend Ranch State Park. Sixteen interviews were conducted over the course of the project (Smith-Savage 1998).

# Chapter 4
# Field Methods

Tim Roberts and Tim Gibbs

## SCOPE AND PURPOSE OF INVESTIGATION

The reconnaissance level archeological investigations of trail corridors at BBRSP were undertaken in order to provide cultural resource information that would be beneficial in establishing a multi-use trail system in the park that would avoid both direct and potential secondary impacts to archeological sites, when possible, or provide recommendations for mitigative measures, when necessary. These investigations also provide the necessary baseline data to conduct future conditions assessments on these sites.

As discussed in Chapter 1, there is a desire to place the results of the present investigation within a framework that will complement research already being conducted in the region. However, the more immediate goals of the BBRSP trail surveys have been oriented toward: (1) ascertaining the presence, nature, and condition of prehistoric and historic archeological sites in and near trail corridors, (2) making preliminary assessments of the research potential of those sites, (3) providing recommendations on the suitability of the sites for designation as official State Antiquities Landmarks, and (4) developing management recommendations for protection of the sites.

While these objectives remained consistent throughout the investigation, the methods used to achieve them changed somewhat over the course of the project, as a result of funding and scheduling concerns. Changes in field methods were primarily designed to accelerate the site recording process. In essence, the Scope of Work in 2004 was designed for somewhat more detailed archeological surveys of proposed trail corridors, while the Scope of Work beginning in 2005 was for more expedient reconnaissance level investigations of the trail corridors. Both investigative approaches required sufficient documentation of archeological sites to allow appropriate management recommendations to be made, and to have adequate baseline information for future monitoring of the archeological sites. Details of the Scopes of Work are provided below. The 2005 Scope of Work was used for all subsequent archeological investigations of trail corridors conducted at BBRSP under both Antiquities Permits 3315 and 5139.

## PRE-FIELD RESEARCH

Prior to conducting the trail surveys, records pertaining to each route were sought at four institutions: the Texas Archeological Research Laboratory (TARL) at The University of Texas at Austin, the THC and the TPWD Archeology Laboratory, both located in Austin, and the Center for Big Bend Studies (CBBS), Sul Ross State University, Alpine. Experts on regional archeology, including Robert J. Mallouf and William A. Cloud, with the CBBS, and Barbara Baskin, Redford, Texas, were consulted about prehistoric and historic settlement patterns within BBRSP and the surrounding region. Park staff

and other informants were interviewed to obtain information on sites known by the staff or former owners of property now within BBRSP.

## SURVEY AND SITE RECORDING

Field work was directed by Project Archeologist and Archeology Survey team Leader Margaret Howard, Project Archeologist Luis Alvarado, or Principal Investigator Tim Roberts. Crews typically consisted of five TPWD archeologists. Each trail, usually consisting of an existing unimproved two-track road, was examined by at least two pedestrian transects spaced at intervals of five meters or less, while a buffer zone extending 50 m from both sides of the trail was traversed by pedestrian transects spaced at 25 m intervals. In a few areas, the 100 m wide trail survey corridor was constrained by steep cliffs or other landforms that were difficult to traverse. Each crew member maintained a map and pertinent field notes of the specific area(s) surveyed. Across all survey areas, the natural exposures of the ground surface were scrutinized, with special attention paid to the immediate trail route.

Using information from previous archeological investigations at BBRSP (cf. Ing, et al. 1996), areas with high prehistoric and historic archeological site potential were determined prior to initiating the 2004 field season. It was determined that sites are likely to be located near key resources like water, shelter, and stone for tool-making. Reliable water sources in the park include a limited number of permanent and intermittent streams, numerous springs issuing from canyon floors, and tinajas or natural rock basins that capture rain water. Shelter is offered by alcoves eroded into ash flows. Chippable stones are widespread, and include rhyolite, chert, novaculite, jasper, agate, and other fine-grained materials.

As time allowed, the pedestrian survey occasionally extended beyond the 100 m wide corridor to include additional areas that were likely to contain significant prehistoric or historic archeological sites. Areas near key resources were targeted on these occasions. Rockshelters, buttes, and other distinctive and highly visible landforms near each proposed trail route were scrutinized for cultural evidence, due to the likelihood that some trail users would be attracted to these locations. Historic features such as mines, windmills, and other structures were inspected to determine whether they have associated archeological deposits. The current condition of previously recorded sites near proposed trail routes was assessed, and site records were updated.

Surface examination was the primary method of site identification, because site visibility is directly related to susceptibility to vandalism. Except at one just one site, shovel tests were not excavated, since minimal ground surface disturbance is anticipated as a result of trail use, and because deeply buried cultural deposits are not visible and are less unlikely to be impacted by potential relic hunters. (Two shovel tests were excavated at historic site 41PS38, the Crawford-Smith Ranch site, in order to determine the extent of historic features.) Surface evidence was used to estimate site boundaries and thickness of cultural deposits, with reference to landforms, geomorphic contexts, and exposed sedimentary profiles. The collection strategy was geared toward collection and curation of artifacts that contain important information on site age and/or cultural affiliation. Non-diagnostic items were generally not collected.

All sites and historic features, as well as the extent of the survey corridor(s), were plotted on appropriate sections of United States Geological Service (USGS) topographic quadrangles. Global Positioning System (GPS) receivers were used to record the location of sites, features, and collected artifacts. Field records for

the 2004 season include State of Texas Archeological Site Data Forms, daily journals, photographs, and other records and logs.

## AMENDMENT TO SCOPE OF WORK FOR 2005 FIELD SEASON AND TO ANTIQUITIES PERMIT 3315

In order to expedite field efforts and focus on the most significant archeological sites that could potentially be affected by increased visitation at BBRSP, the Scope of Work was amended for the 2005 field season, and subsequent seasons. This amendment contained methodologies for expedited archeological survey (i.e. reconnaissance), site recording, monitoring, and mitigation to be conducted under Antiquities Permits No. 3315 and No. 5139. With the exceptions of the Rancherias Link and Yedra Canyon trails, all remaining trail routes investigated during the present project were examined under the amended Scope of Work.

### Rapid Reconnaissance and Key Site Identification

The purpose of rapid reconnaissance, as was adopted for use during the 2005 field season and subsequent field seasons at BBRSP, was to expediently determine the number, location, and apparent integrity of archeological sites along proposed trail routes, and to identify the sites that were highly significant and consequently vulnerable to the impacts of visitation and vandalism. These sites were termed as key sites. Previous investigations in BBRSP and vicinity have found that significant archeological sites contain five types of features that have a high research potential: rockshelters, cultural middens, rock features, historic structures, and rock imagery (Ing, et al. 1996; Sanchez 1999; Ohl and Cloud 2001; Gibbs 2004).

Rockshelter deposits are often stratified, and may contain multiple, isolable components. Their sheltered context offers improved preservation of floral and faunal materials like charcoal, wood, fiber, bone, and fur. Pictographs (rock paintings) and on rare occasions petroglyphs (rock carvings) are found on the walls of some shelters at BBRSP. Rockshelter openings are typically dark and visible from a distance.

Darkly stained cultural middens may offer improved preservation of floral and faunal materials like charcoal and bones. They often support dense vegetation but can be readily evident to onlookers. Rock features like Cielo complex enclosures, hearths, and tipi rings preserve short-term events and spatial patterning within archeological sites. Excavation of Cielo complex features in the Big Bend region has demonstrated that the shallow cultural deposits around them contain a wealth of information on their age, function, and cultural affiliation (cf. Mallouf 1995). Although a number of sites in BBRSP have one or two hearths, sites with three or more hearths are likely to preserve spatial patterning that may indicate group size and social organization. Tipi ring features are significant due to their scarcity in the region, and because their precise age and cultural affiliation have not been determined. Rock features can be easily disrupted by pedestrian traffic and erosion.

Historic structures embody styles, periods, and methods of construction that are representative of the cultural history of the region. Structures are highly visible and also serve as powerful interpretive tools to evoke the lives and occupations of prior inhabitants. The ruinous condition of many historic structures in the state park causes them to be vulnerable to natural and human impacts.

Rock imagery sites preserve rare information on the symbolic and ideological aspects of cultures, and their stylistic elements may be used to identify cultural connections. These fragile

painted and inscribed images on semi-stable rock surfaces are highly vulnerable to natural and human impacts.

Sites that do not contain the key features listed above include open camps with fewer than three hearths, lithic scatters, quarries, historic artifact scatters without features or structures, and isolated historic features like windmills, corrals, and rock walls. The research potential and information yield of such non-key sites is low because there is considerable redundancy in their data sets. Consequently, damage to non-key sites does not impair interpretation of regional prehistoric and historic cultural patterns. Under this amendment, documentation of non-key sites was limited to expedient site recording (see below), and no recommendations were made for their monitoring.

### Rapid Survey Methods

The main aspect in which rapid reconnaissance differs from other archeological surveys conducted under Antiquities Permit No. 3315 is the expedient site recording method that was employed (see below). The width of the survey corridors examined during the 2005 field season, and subsequent field seasons, was identical to that employed during the 2004 field season, extending 50 meters (164 feet) from each side of the proposed trail routes except where constrained by landforms that are difficult to traverse. Trails were examined by pedestrian transects spaced at intervals of five meters (16 feet) or less, and the 50 meters (164 feet) buffer zone was traversed by pedestrian transects spaced at 25 meters (82 feet) intervals. Survey extended beyond the 100-meters (328 feet) corridor as time allowed, including areas that were likely to contain archeological sites within sight of the proposed trail corridor. When key sites were located within this corridor, efforts were made to shift the proposed trail away from them if alternate established routes like jeep trails were available.

During the 2005 field season, the system for assigning temporary field numbers to the new archeological sites and isolated finds was modified to provide more information for each location. Each field number included the capitalized initials of Big Bend Ranch, 'BBR', followed by the capiltalized initials of the USGS 7.5' quadrangle upon which the site or isolated find was located, such as 'MC' for the Manzanillo Canyon quadrangle. These initials were followed by the date that the site was found, for example 02/08/05. The date was followed by a hyphen and a sequential number specific to the site area or isolated find. An example of a field number in its entirety would be BBRMC02/08/05-12. This field numbering system was utilized throughout the remainder of the project.

## LEVELS OF SITE RECORDING

### All Archeological Sites

Expedient site recording was conducted on all archeological sites (key and non-key). The following information was collected for all sites:

- estimated site boundary, based on rapid reconnaissance, GPS data, landforms, and extent of similar sites in BBRSP;
- identification of features;
- general information on site age and artifact content; and
- estimation of integrity.

Documentation consisted of:

- completion of a TPWD Expedient Site Record Form (Appendix D);
- completion and submittal of TexSite data file; and
- assignation of trinomial

### Key Archeological Sites

Full site recording was completed for all key sites. In addition to the above information, full site recording entailed collection of the following data:

- site boundary based on intensive reconnaissance and confirmed by GPS data;
- identification of site type, age, and cultural affiliation, based on collection of time-diagnostic artifacts;
- location and documentation of all features and historic structures by means of GPS receiver and photography; and
- completion of a State of Texas Archeological Site Data Form

## SITE MANAGEMENT RECOMMENDATIONS AND MITIGATION TRIGGERS

Key archeological sites and historic structures identified during the investigations will be monitored at specified intervals to ascertain whether they are being damaged by increased visitation or other impacts. Digital photographs taken during full site recording provide a baseline for site condition, and will be used to monitor for any changes in the condition of archeological features and structures over time.

Potential damage that may occur to archeological sites and historic structures along trail corridors due to increased visitation includes surface collection, uncontrolled excavation, disruption of rock features, and damage to historic structures and rock imagery. Surface collection, while regrettable, is almost impossible to prevent across an extensive property like BBRSP. Evidence of surface collection alone (e.g., artifact cull piles) will not be considered to be sufficient grounds to trigger mitigation measures for key archeological sites on BBRSP. Cull piles noted during monitoring will be dispersed to deter future artifact collection, however.

Uncontrolled excavation on key archeological sites can result in substantial loss of information. Small, isolated excavations may be animal burrows or burial of human waste (though prohibited on BBRSP), and are not necessarily evidence of vandalism. The presence of multiple, larger excavations and/or digging equipment like shovels and screens is clear-cut evidence of severe vandalism, however, and constitutes sufficient grounds to trigger mitigation measures.

Disturbance to rock features can be caused by animal traffic and erosion as well as humans, so such disturbance will be judged in terms of its magnitude. Baseline photographs will be used to assess the degree of feature disruption. If at least 25 percent of the features on a site retain less than 50 percent of the integrity they possessed at original recording, this level of damage constitutes sufficient grounds to trigger mitigation measures.

Many historic structures in BBRSP are in ruins, but their decline can be hastened by purposeful destruction of structural elements. In comparison to baseline photographs, the degree of structural damage can be readily assessed and attributed to cause. Natural causes like gravity, water damage, or failure of structural elements are easily recognizable, while purposeful damage is typically of greater magnitude. Graffiti may accompany purposeful structure damage, though in and of itself is relatively minor and generally reversible. Evidence of purposeful damage to historic structures (excluding graffiti) constitutes sufficient grounds to trigger mitigation measures.

Rock imagery may deteriorate slowly due to fading, water damage, rock spalling, insect or bird nest construction, and other natural

causes. Albeit of concern, these damages are not related to increased visitation. Human damage to rock imagery includes defacement by modern graffiti like shallow inscriptions or spray paint. Rock imagery also can be damaged through soot from unauthorized campfires. The most severe purposeful damage to rock imagery is removal of images by chiseling into the rock or gunshot impact. As assessed in comparison to baseline photographs, any human damage to rock imagery will constitute sufficient grounds to trigger mitigation measures.

In sum, damages to key sites and structures that are not severe enough to trigger mitigation measures are:

- erosion and water damage to archeological sites and rock art;
- natural deterioration of rock art;
- evidence of surface collection;
- small excavations less than two feet in diameter;
- disruption of less than 25 percent of the rock features at a site which retain over 50 percent of their integrity at original recording; and
- damage to historic structures caused by water, gravity, or graffiti.

Damages to key sites and structures that constitute sufficient grounds to trigger mitigation measures are:

- unauthorized excavations greater than two feet in diameter;
- presence of shovels, screens, and/or other digging equipment;
- disruption of 25 percent or more of the features at a site which retain over 50 percent of their integrity at recording;
- human damage to historic structures, excluding graffiti; and/or
- graffiti and/or other human damage to rock art.

## MITIGATION MEASURES

If periodic monitoring of the condition of key archeological sites and historic structures along trails and campsites reveals damage sufficient to trigger mitigation measures according to the criteria specified above, the TPWD will notify the THC and furnish evidence of the damage. The TPWD may take immediate measures to limit access to key sites and structures while considering which mitigation measures will be most effective to compensate for and/or alleviate the damage. Operational concerns, site security, and magnitude of damage will play a role in selection of mitigation measures for particular key sites. The TPWD will propose a mitigation plan to the THC, and on its approval, will undertake those mitigation measures.

Mitigation measures to compensate for damage to key sites or structures may include one or more of the following:

- installation of anti-vandalism displays along trails or in park facilities;
- restoration of the ground surface, structures, or rock art;
- installation of physical barriers like fences or protection of site surfaces to prevent access;
- increased park patrols of damaged sites, and issuance of citations;
- re-routing trails to prevent visibility or access to damaged sites;
- installation of remote monitoring devices to alert park staff when visitors enter unauthorized areas;
- restricting access in select areas, or making access available on a guided-only basis;
- trail closure; and
- when the threat of vandalism cannot be alleviated, intensive excavation or data recovery from sites or structures.

## POST-FIELD STAGE

All artifacts collected during the trails surveys at BBRSP, consisting of a total of 890 specimens, were analyzed and prepared for curation. All artifacts, as well as project photographs, maps, and other field records are permanently curated at the TPWD Archeology Laboratory in Austin. Specific artifact analytical techniques are described in Chapter 6.

# Chapter 5
# Results of Investigations

Tim Roberts and Joshua Gibbs

The results of the trail surveys at Big Bend Ranch State Park are grouped by trail name and presented in chronological order by field season (see Figure 2). The individual site discussions and recommendations are provided in this chapter and are summarized in matrix format in the table in Appendix A. Information on isolated finds can be found in Appendix C.

Recommendation for official designation of a site as a State Antiquities Landmark is based off applicability of one or more of the following criteria (§26.8, Title 13, Part 2, Texas Administrative Code):

(1) the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information;

(2) the site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site;

(3) the site possesses unique or rare attributes concerning Texas prehistory and/or history;

(4) the study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge;

(5) the high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to insure maximum legal protection, or alternatively further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected.

## 2004 FIELD SEASON

### Rancherias Link Trail

The Rancherias Link Trail utilizes approximately seven miles of an existing unimproved two-track road, approximately eight feet in width, which runs between the Rancherias Trail and the Sauceda Ranger Station in the interior of the park, and will be used as a publicly accessible hiking and mountain biking trail (Figure 10). In association with the Rancherias Link Trail, a former ranching facility known as Campo Javelina, or Javelin Camp, is being used as a primitive overnight campsite. This camping area is less than one acre in size.

The TPWD Archeology Survey Team conducted the archeological survey of the Rancherias Link Trail corridor February 10 - 17, and 28, 2004. The total area surveyed for the Rancherias Link Trail and Javelin Camp, including buffer areas and areas of interest within view of the trail corridor, encompassed 411 acres.

The location and high research potential of previously recorded site 41PS542, a multi-component Late Paleoindian/Middle Archaic/Late Archaic/Late Prehistoric site, resulted in shifting the Rancherias Link Trail in this area fur-

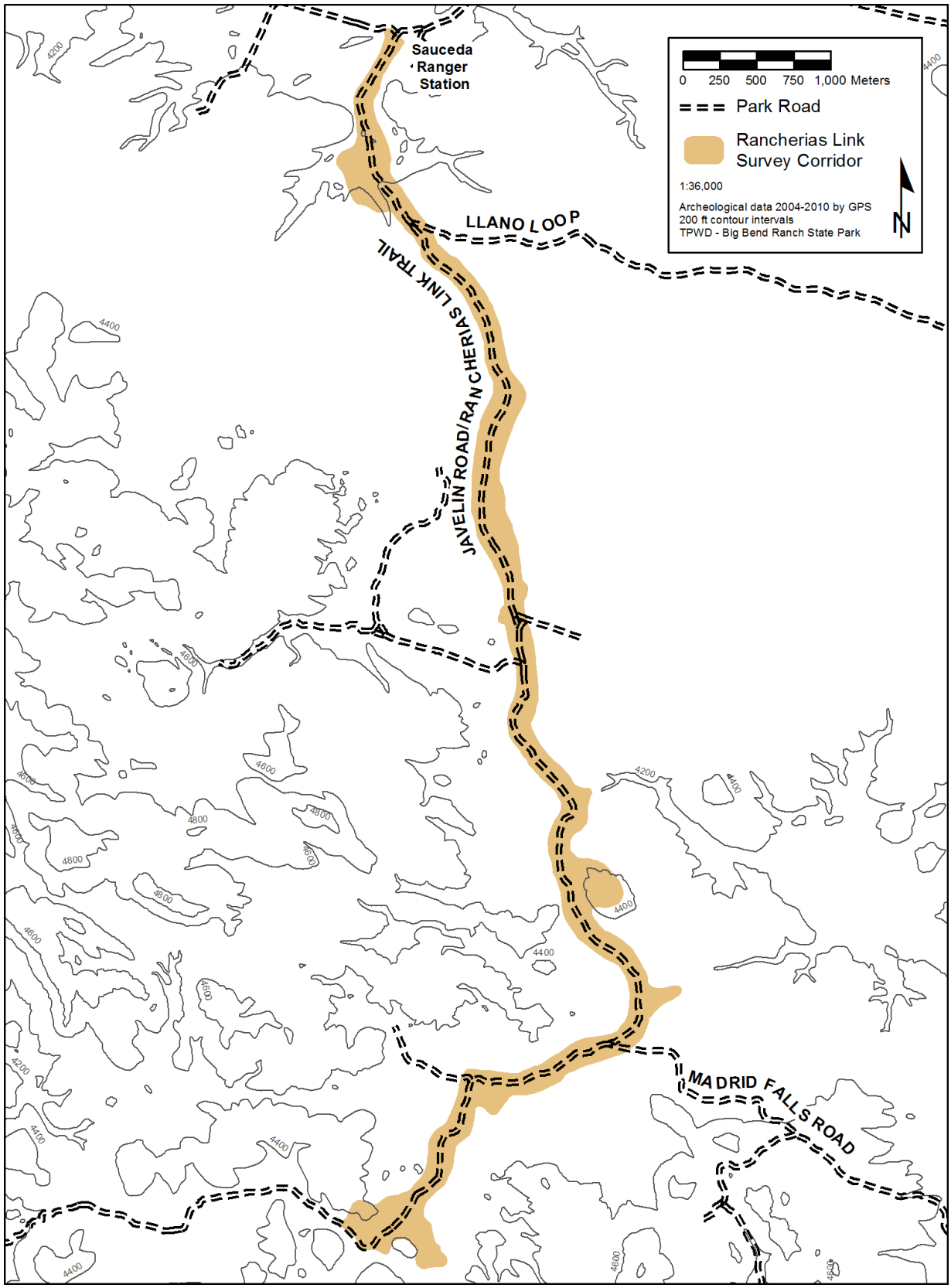


**Figure 10.** Map showing location of Rancherias Link Trail.

ther west to another existing road segment that skirts the edge of the site (versus going through the middle of the site). A scenic overlook that may be installed on a high hilltop to the west would further shift attention away from the site area. The realigned trail corridor and potential scenic overlook were surveyed by the TPWD Archeology Survey Team. Furthermore, in areas of the realignment where the existing unimproved two-track road was severely eroded or was sufficiently steep that erosion would be a likely problem in the future, the Survey Team investigated alternative routes that did not follow the existing road. No cultural resources were encountered along any portion of the proposed trail realignment.

Three previously recorded sites were re-recorded (41PS512, 41PS542, and 41PS557) and five newly identified sites (41PS930-41PS934) were recorded along the Rancherias Link Trail in 2004. The archeological sites are described below. See Appendix A for site summary data. Twelve isolated finds were documented along this trail corridor (Appendix C).

***41PS512 (Horsetrap Spring)***

Site Type: Site 41PS512 is a possible Paleoindian, Late Archaic, and Late Prehistoric open campsite, and a historic dump.

Site Area: The site measures 410 meters north-south by 300 meters east-west, encompassing a total area of 30.38 acres.

Landform: The site is situated on a gently sloping to level area surrounding intermittent drainages and Horsetrap Spring.

Soil Type: Soils in the site area have been identified by the USDA Natural Resources Conservation Service (NRCS) as 60 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes and 40 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,190 to 4,210 feet AMSL.

Vegetation: Cottonwoods up to 50 feet in height and woody vegetation are present along the Horsetrap Spring drainage, while creosote, mesquite, catclaw, agarita, broomweed and allthorn are common away from the drainage. Surface visibility is approximately 75 to 100 percent.

Disturbance: Site 41PS512 has been impacted by sheet and gully erosion, as well as livestock trampling, previous road development, the placement of a former survival camp within the site area, and artifact collecting (as evidenced by the presence of an artifact cull pile within the site).

Previous Investigations: This site was originally recorded by William A. Cloud and Debra Beene in 1990, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:210).

Present Investigation: Site 41PS512 was re-recorded in 2004. Features on this prehistoric open campsite and historic dump include four hearths in the northwest, northeast, center and southeast areas of the site; a moderately dense scatter of burned rocks along the east side of a drainage southeast to northeast of Horsetrap Spring; four bedrock outcrops with metate facets or mortar holes in the north and central parts of the site; a lithic concentration and gray midden soil. Features related to the historic component are limited to the dump itself (concentration of historic artifacts). During the present investigation, the site boundary was extended beyond its 1990 boundary, now measuring 410 meters north-south by 300 meters east-west. The archeological deposits range in depth from the ground surface to perhaps more than 20 centimeters below the surface.

Artifact Analysis: One fragmentary lanceolate projectile point was recovered from this site by Cloud and Beene in 1990. Prehistoric artifacts observed during the 2004 investigation include chipped stone debitage and debris, scrapers, dart and arrow points, mano and metate fragments (including part of a deep basin metate), and burned rock. Projectile points recovered in 2004 are one Late Archaic Paisano dart point, one Late Archaic Palmillas dart point (Form 2), one Late Archaic Figueroa dart point, one untyped Archaic dart point, one Late Prehistoric Diablo arrow point fragment, and one untyped Late Prehistoric arrow point fragment. Historic artifacts observed on the site include a metal hinge, a sheep shearing blade, a clear glass bottle stopper, a clear glass bottle neck, flat glass, and pipe.

Significance: This multi-component possible Late Paleoindian/Middle Archaic/Late Archaic/Late Prehistoric/Historic site has moderately high research potential and was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: The most significant cultural deposits are the midden areas (gray midden soil) in the central part of the site. These midden areas are covered by a dense growth of woody shrubs and cannot be seen from the Rancherias Link Trail, which passes along the east edge of the site. Although an artifact cull pile (now dispersed) near the road indicates that the site has been subjected to unauthorized collection in the past, the diffuse artifact scatter that is visible from the trail is unlikely to elicit the attention of trail users. Nonetheless, it is recommended that 41PS512 be monitored at least biannually to ensure that the site is not being damaged by trail users.

***41PS542 (Divisadero)***

Site Type: Site 41PS542 is a multi-component Late Paleoindian, Middle Archaic, Late Archaic, and Late Prehistoric open campsite.

Site Area: The site measures 420 meters north-south by 470 meters east-west, encompassing a total area of 48.8 acres.

Landform: Site 41PS542 is located near the head of Arroyo Segundo on its divide with Panther Canyon. The sloping colluvial terrace drains into Arroyo Segundo.

Soil Type: Soils within the site area have been identified by the USDA Natural Resources Conversation Service as 80 percent Holguin very gravelly fine sandy loam, 1 to 8 percent slopes and 20 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,340 to 4,400 feet AMSL.

Vegetation: Creosote bush is the predominant vegetation across the site. Prickly pear cactus, ocotillo, tasajillo, mesquite, other cacti, and mixed grasses are also present. Vegetation conditions allow 95 percent ground surface visibility.

Disturbance: Site 41PS542 has been impacted by sheet and gully erosion, as well as previous road construction and prior archeological investigations (recovery of select artifacts).

Previous Investigations: Site 41PS542 was originally recorded by J. David Ing and others in 1991 (Ing et al. 1996:80–81).

Present Investigation: Site 41PS542 was re-recorded in 2004. Features recorded on this prehistoric open campsite include a total of 34 single and multiple hearths, including a scatter of firecracked rocks in the southeast corner of the site. Two tipi rings identified in 1990 along the western ranch road that crosses the site (the site is partially bracketed by three former ranch roads that form a triangle) were relocated during the 2004 investigation, and two ad-

ditional tipi rings were identified and recorded. Five other stone circle features, including three that were documented in 1990, were identified on a low hill at the western edge of the site. During the 2004 investigation, the site boundary was somewhat modified, but the site dimensions remain about the same—420 meters north-south by 470 meters east-west. The archeological deposits range in depth from the ground surface to perhaps more than 20 centimeters below the surface.

Artifact Analysis: About 70 projectile points and other lithic tools were recovered from 41PS542 in 1991. Among the projectile points collected in 1991 were Late Paleoindian Angostura and Golondrina points, Middle Archaic Pedernales-like dart points, and Late Archaic Palmillas, Conejo, Paisano, Figueroa, and Shumla dart points (Ing et al. 1996:96–114). Artifacts observed during the 2004 investigation include chipped stone debitage and debris, dart and arrow points, manos and metates, and burned rock. Projectile points, recovered during the 2004 investigation are one Untyped Early Archaic dart point, one Late Archaic Shumla dart point fragment, one Late Archaic Hueco/ Ellis dart point fragment, one Late Archaic expanding stem dart point (untyped), one Late Archaic Figueroa dart point, one untyped Archaic dart point, one untyped dart point fragment, one Late Prehistoric Perdiz arrow point fragment, two Late Prehistoric Scallorn arrow points, one untyped Late Prehistoric arrow point, and one untyped Late Prehistoric arrow point fragment.

Significance: This Paleoindian/Middle Archaic/Late Archaic/Late Prehistoric site has high research potential and was designated as an official State Archeological Landmark in 1991. The central and west parts of the 420 by 270 meter site contain the most significant cultural deposits, consisting of numerous intact rock features (i.e., hearths, tipi rings, and other stone circle features) that may have associated cultural deposits. The collection includes a significant number of diagnostic projectile points.

Recommendations: Due to the high visibility and sensitivity of the central and western parts of the site, the route of the Rancherias Loop Trail was shifted further west to skirt the edge of the site, along another existing ranch road segment from which few of the cultural features at 41PS542 are visible. A scenic overlook that may be installed on a high hilltop to the west of the site also would shift attention away from the site area. The realigned trail corridor and scenic overlook have been surveyed by the TPWD Archeology Survey Team and contain no cultural deposits. It is recommended that 41PS542 be monitored at least biannually to ensure that the cultural features on this site are not being vandalized.

***41PS557***

Site Type: Site 41PS557 is a multi-component Archaic and Late Prehistoric open campsite.

Site Area: The site measures 230 meters north-south by 270 meters east-west, encompassing a total area of 15.4 acres.

Landform: Site 41PS557 is located on the lower end of an upland toeslope, about 100 meters wide, between two intermittent drainages.

Soil Type: The site is located within soils identified by the USDA Natural Resources Conservation Service as Scotal-Rock outcrop complex, 5 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,240 to 4,250 feet AMSL.

Vegetation: Site 41PS557 is sparsely vegetated with creosote and other woody shrubs, as well as cholla, opuntia, whitethorn, mariola and ephedra. Surface visibility is 90 percent.

Disturbance: The site has been impacted by sheet erosion across the slopes, which is most severe near the intermittent drainages that border the site. In addition, an unimproved road cuts across the west edge of the site.

Previous Investigations: Site 41PS557 was originally recorded in 1991, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:209).

Present Investigation: Site 41PS557 was re-recorded in 2004. Features on this prehistoric open campsite include five hearths composed of clusters of fairly large firecracked rocks that appear to be somewhat displaced by erosion. A lithic concentration about 8 meters in diameter was observed on the site, and consists mostly of white chert debitage. The archeological deposits at 41PS557 range in depth from the ground surface to perhaps more than 10 centimeters below the surface.

Artifact Analysis: One Late Prehistoric Toyah arrow point was collected from this site in 1991. No artifacts were collected from 41PS557 during the 2004 investigation, but medial and distal dart point fragments were noted. In addition, chipped stone debitage (primarily decorticate) and debris, two large slab metates, and firecracked rocks were observed on the site. Lithic material types included mostly chert, but jasper, chalcedony, and coarse-grained materials like rhyolite were also present.

Significance: This Archaic/Late Prehistoric site has a moderately high research potential, and warrants designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: The hearth features on this site, located in the central and east part of the site, cannot be seen from the trail route, which passes along the west edge of 41PS557. In addition, the diffuse artifact scatter that is visible from the trail is unlikely to elicit the attention of trail users. Nonetheless, this site should be monitored at least biannually to assess its condition and it should be nominated as a State Antiquities Landmark.

***41PS930***

Site Type: Site 41PS930 is a multi-component Late Archaic and Late Prehistoric open campsite.

Site Area: The site measures 70 meters northeast-southwest by 70 meters east-west, encompassing a total area of 1.2 acres.

Landform: Site 41PS930 is located on a gently sloping upland landform along the eastern edge of an unnamed intermittent drainage.

Soil Type: The site is located within soils identified by the USDA Natural Resources Conservation Service as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,320 to 4,330 feet AMSL.

Vegetation: Scattered creosote is dominant across 41PS930. Some yucca and ocotillo are also present on the site, and woody brush is evident along the intermittent drainage. Surface visibility is 95 percent.

Disturbance: The site has been impacted by severe sheet erosion, as well as livestock trampling and the establishment of an existing unimproved road on the east edge of the site.

Previous Investigations: None.

Present Investigation: Site 41PS930 was recorded in 2004. Features recorded on this prehistoric open campsite include a single hearth on the east edge of an unnamed intermittent drainage. This feature measured about 1.4 by

2 meters and appeared to be relatively intact. A sparse, widely distributed lithic scatter is associated with the hearth. The depth of the archeological deposits at 41PS930 is unknown, but they are probably shallow based on the nature of the soils and the upland landform upon which the site is situated.

Artifact Analysis: One Late Archaic Paisano dart point, one Late Archaic Frio dart point fragment, and one Late Prehistoric Perdiz arrow point were recovered from 41PS930 during the 2004 investigation. Other artifacts observed on the site include eight chipped stone flakes and two thin bifaces. These items were produced from white and light tan cherts.

Significance: This Late Archaic/Late Prehistoric open campsite has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The hearth feature at 41PS930 cannot be seen from the Rancherias Link trail route, which passes along the east edge of the site. The diffuse artifact scatter that is visible from the proposed trail is unlikely to elicit the attention of trail users. No further work is recommended at this site.

***41PS931***

Site Type: Site 41PS931 is a multi-component Early Archaic and Late Archaic open campsite.

Site Area: The site measures 220 meters north-south by 110 meters east-west, encompassing a total area of six acres.

Landform: Site 41PS931 is located at the headwall of a shallowly-incised drainage that crosses a broad, flat llano. Low, rocky hills border the drainage on the east.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 60 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes, and 40 percent Scotal-Rock outcrop complex, 5 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,280 to 4,290 feet AMSL.

Vegetation: The site has a sparse cover of creosote and woody shrubs. The vegetation is denser along the nearby intermittent drainage. The overall surface visibility is about 95 percent.

Disturbance: The site has been impacted by severe gully erosion, sloping toward the drainage headwall on the eastern edge of the site. This erosion was accelerated east of the site by the establishment of an undeveloped ranch road prior to the acquisition of the property by TPWD.

Previous Investigations: None.

Present Investigation: Site 41PS931 was recorded in 2004. Features recorded on this prehistoric open campsite include two possible hearths, one consisting of large burned rocks exposed on the slope of an eroded ridge and the other consisting of a relatively dense cluster of burned rocks on the crest of the ridge. Scattered burned rocks in the southern part of the site suggest that additional burned rock features were once present, but have been dispersed by erosion. Other features recorded on the site include a bedrock outcrop with a grinding facet at the south end of the site. Based on the depth of the hearth feature exposed on the slope of the ridge, the archeological deposits at 41PS931 may range in depth from the ground surface to about 15 centimeters below the surface.

Artifact Analysis: The artifact scatter includes chipped stone tools and mostly decorticate debitage produced primarily from chert and

other fine-grained materials. A metate fragment, a few coarse-grained flakes, and a coarse-grained core were noted; the coarse-grained flakes retain cortex. One Early Archaic Bell dart point, one Late Archaic Paisano dart point, one Late Archaic Ensor dart point fragment, and one Late Archaic Frio dart point fragment were collected for curation.

Significance: This Middle Archaic/Late Archaic open campsite has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The west boundary of 41PS931 is located about 20 meters east of the trail route in a featureless landscape, so the site will not be evident to trail users. No further work is recommended at this site at this time.

***41PS932***

Site Type: Site 41PS932 is a prehistoric open campsite of unknown age.

Site Area: The site measures 170 meters north-south by 100 meters east-west, encompassing a total area of 4.2 acres.

Landform: Site 41PS932 is on the lower reaches of an upland slope, between two intermittent drainages that are located to the north and south of the site. These drainages join each other about 100 meters east of 41PS932.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 75 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes and 25 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,220 to 4,240 to feet AMSL.

Vegetation: Woody shrubs and succulents are scattered across the site, providing 90 percent surface visibility.

Disturbance: The site has been impacted by sheet erosion, as well as livestock trampling and the establishment of an undeveloped ranch road on the west edge of the site.

Previous Investigations: None.

Present Investigation: Site 41PS932 was recorded in 2004. Features recorded on this prehistoric open campsite include two hearths, one bisected by a shallow arroyo and the other located between two shallow erosional channels. Based on the depth of the bisected hearth, the archeological deposits at this site may range in depth from the ground surface to about 15 centimeters below the surface.

Artifact Analysis: The artifact scatter at 41PS932 includes a diffuse scatter of fewer than 100 pieces of chipped stone debitage and debris, mostly decorticate, that were produced primarily from white chert/chalcedony, and occasionally red jasper. Other chipped stone artifacts observed on the site include a uniface and a scraper. A quartzite mano was also noted. No diagnostic artifacts were identified at 41PS932, and no artifacts were collected from this site during the present investigation.

Significance: This prehistoric open campsite of unknown age has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The two hearth features on this site are located 20 meters east of the Rancherias Link Trail and cannot be seen from the trail corridor. Furthermore, the portion of the diffuse artifact scatter that is visible from the proposed trail route is unlikely to elicit the attention of trail users. No additional work is recommended at 41PS932.

***41PS933***

Site Type: Site 41PS933 is a prehistoric open campsite of unknown age.

Site Area: The site measures 30 meters north-south by 20 meters east-west, encompassing a total area of 0.15 acre.

Landform: Site 41PS933 is situated upon a small bedrock/colluvial bench between two small intermittent drainages.

Soil Type: Soils within the site area have been identified by the USDA Natural Resources Conservatoin Service as Holguin very gravelly fine sandy loam, 1 to 8 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,300 to 4,310 feet AMSL.

Vegetation: Mixed grasses and woody shrubs are scattered across the site and include creosote bushes, opuntia, and whitethorn acacia. Ground surface visibility is approximately 95 percent.

Disturbance: The site has been impacted by severe gully erosion, as well as livestock trampling and the establishment of an undeveloped ranch road.

Previous Investigations: None.

Present Investigation: Site 41PS933 was recorded in 2004. Features recorded on this prehistoric open campsite include two hearths, located approximately 6 meters apart and situated on knolls. Both hearths measure about 2 meters in diameter. A very sparse lithic scatter is associated with the hearths. Based on the presence of bedrock exposures within the site area, and evidence of severe erosion on the site, the depth of the archeological deposits at 41PS933 probably range from ground surface to less than 10 centimeters below the surface.

Artifact Analysis: The artifact scatter observed at 41PS933 includes only about 10 pieces of chipped stone debitage, produced from red chert/jasper, rhyolite, white chert, and yellow chert. No diagnostic artifacts were identified at 41PS933, and no artifacts were collected from this site during the present investigation.

Significance: This prehistoric open campsite of unknown age has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The two hearth features and associated lithics on this small site are situated on knolls that overlook the Rancherias Link Trail, and are unlikely to be observed by trail users. No additional work is recommended.

***41PS934 (Javelin Camp)***

Site Type: Site 41PS934 is a prehistoric artifact scatter, possibly of Middle Archaic-Late Archaic age, and a historic (1940s–1967) ranch line camp.

Site Area: The site measures 240 meters north-south by 280 meters east-west, encompassing a total area of 16.6 acres.

Landform: Site 41PS934 is located on the north side of upper Arroyo Segundo, on a colluvial/bedrock bench. The site is bounded on the north by an unnamed tributary to Arroyo Segundo.

Soil Type: Soils in the site area have been identified by the USDA Natural Resources Conservation Service as Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,280 to 4,310 feet AMSL.

Vegetation: Mixed grasses and woody shrubs are scattered across the site. Creosote bushes, opuntia, and whitethorn acacia were noted. Dead vines on the ramada are the only possible evidence of domestic vegetation on the site. Ground surface visibility is approximately 90 percent.

Disturbance: The site has been impacted by sheet erosion, and the area south of the extant house on the site was apparently scraped; a bulldozer berm is evident near Arroyo Segundo (Ing et al. 1996:75).

Previous Investigations: The Javelin Camp has been known about for years, but was not formally recorded as an archeological site prior to the present investigation. There is discussion about the Fowlkes Ranch water distribution system in 'Impressions of the Bofecillos Mountains' by Griffin Smith, Jr., in Bofecillos Mountains, A Natural Area Survey (Smith 1976:2). Ing et al. (1996:196, 203) discuss the history of the tract of land upon which Javelin Camp is located, and the possible span of occupation (1940s–1967) of the camp.

Present Investigation: Site 41PS934 was recorded in 2004. Features recorded on this site include a two-room wood frame house with an exterior of chicken wire, cement and plaster. A tin outhouse is located outside the southwest corner of the house, which faces approximately east. Twenty meters in front of the house is an old wooden windmill stand, and a pumpjack that is located under a tin lean-to. About 180 meters northwest of the house is a circular rock tank; east and southeast of the tank are livestock corrals and pens. Archeological deposits appear to be limited to the ground surface. Artifacts are primarily historic, but a few prehistoric items were also observed.

Artifact Analysis: About five pieces of chipped stone debitage, a biface, and one mano were noted. Historic artifacts observed include domestic and ranching related debris, including solarized purple, clear, green, brown, and blue bottle glass fragments, tin cans, iron pipes, barbed wire, horseshoes, muleshoes, windmill parts, appliances, aluminum pull tabs and cans, and other items. Three horseshoes, two muleshoes, and one piece of solarized purple glass were collected as a comparative sample.

Significance: This site has moderately low research potential because it dates primarily to the mid-twentieth century. The site does not meet the criteria for designation as an official State Antiquities Landmark. Nonetheless, 41PS934 does have considerable interpretive potential, as an illustration of water management on the former ranch property during the mid-twentieth century.

Recommendations: Interpretation of water management on the former ranch property should be considered at the Javelin Camp location, either in trail literature or interpretive wayside exhibit panels. The condition of 41PS934 should be monitored annually.

**Yedra Canyon Trail**

The Yedra Canyon Trail is a multi-use trail that follows approximately six miles of an existing unimproved two-track road, about eight feet in width, that extends from the main interior park road, through Yedra Canyon, to Terneros Creek in the north central part of BBRSP (Figure 11).

The TPWD Archeology Survey Team conducted the majority of the archeological survey of the Yedra Canyon Trail corridor between February 24 and March 2, 2004. Due to time constraints, approximately one mile on the north end of the trail was not surveyed until the 2005 field season. The total area surveyed for this trail corridor was 522 acres. The Yedra Canyon Trail survey included re-recording one previously

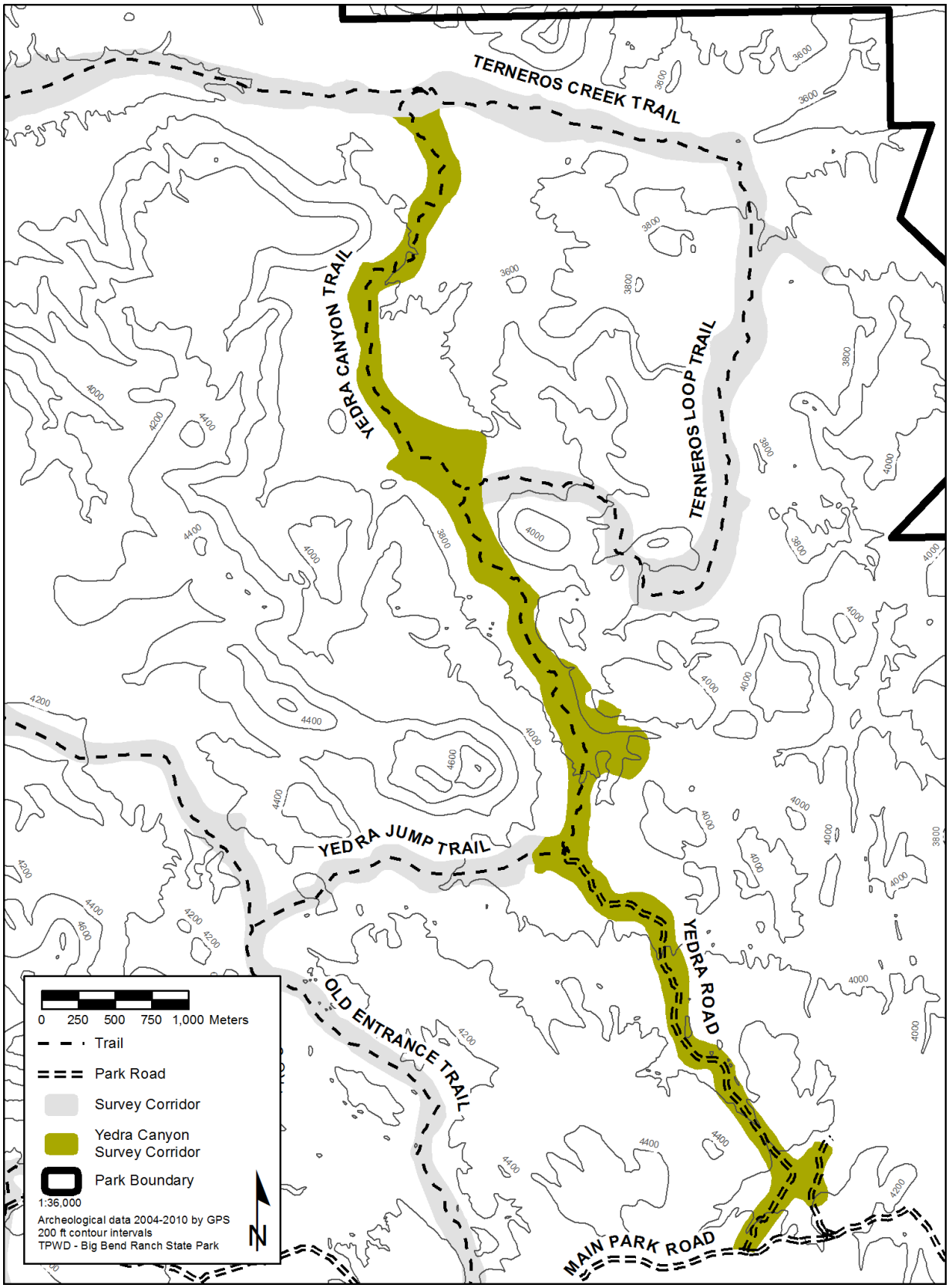


**Figure 11.** Map showing location of Yedra Canyon Trail.

recorded site (41PS621) and recording eight newly-discovered sites (41PS935–41PS942). The archeological sites are described below. See Appendix A for site summary data. Four isolated finds were also documented along the trail corridor and are summarized in Appendix C.

***41PS621 (Papalotito Colorado)***

Site Type: Site 41PS621 is a prehistoric open campsite of unknown age.

Site Area: The site measures 275 meters north-south by 115 meters east-west, encompassing a total area of 7.8 acres.

Landform: The majority of artifacts at 41PS621 were found on a flat bench which is bordered by high ridgetops along the east and west. A lower terrace which also contains artifacts occurs to the north-northwest. This terrace is just above a large confluence of two drainages.

Elevation: The elevation of the site ranges from about 4,160 to 4,200 feet AMSL.

Vegetation: Creosotebush is the dominant vegetation on 41PS621, allowing about 75 percent surface visibility.

Soil Type: Soils at 41PS621 have been mapped by the USDA Natural Resources Conservation Service as 95 percent Pantak and Lingua soils, 1 to 16 percent slopes and 5 percent Nolam and Paisano soils, 1 to 3 percent slopes (USDA 2013).

Previous Investigations: Site 41PS621 was originally recorded in 1995 during a reconnaissance survey of the park (Ing et al. 1996).

Present Investigation: Site 41PS621 was re-recorded in 2004. The site was also used as a practice site for Section 106 training being provided to TPWD staff and NRCS participants at BBRSP. The present investigation resulted in the expansion of the original 1995 site boundary on the north and south ends of the site. A light concentration of chipped stone debitage was noted in the northwest portion of the site, while a fire ring was observed near the southwest corner of the site. In general, there was a paucity of artifacts observed at 41PS621, and the artifacts that were present were widely scattered across the site. The archeological deposits on this site are probably limited to the ground surface and the maximum depth of cultural deposits is estimated to be no more than 10 centimeters.

Artifacts: The 1995 survey identified one uniface scraper, two thick preform fragments, and 15–20 chipped stone flakes. At that time, a collector's cull pile was noted at the Papalote Colorado campsite. The cull pile included one preform distal fragment, one core fragment, and two pieces of chipped stone knapping debris (chunks). These artifacts were produced from a variety of cherts, including a light gray translucent material, a brownish-red chert with cream colored inclusions, a glossy red-gray and black mottled chert, and a dull brown chert. The cull pile also included quartz-like crystal fragments and one polished red variegated jasper pebble. The 2004 investigation revealed several flakes, a core, two biface fragments, a graver, a uniface, two metates, and occasional burned rocks. No time-diagnostic artifacts were observed in 2004.

Disturbance: This site, estimated to be approximately 50 percent intact, has been impacted by erosion, road construction, artifact collecting, and use of the area for campsite parking.

Significance: Site 41PS621 has low research potential and does not meet State Antiquities Landmark designation criteria.

Recommendations: This site is situated 100 meters east of the Yedra Canyon Trail, and behind a barbed wire fence; it is not visible from

the trail and will not be evident to trail users. The site was originally recorded in 1995, and in 1997 the THC concurred with a recommendation for no further work at the site "based on the paucity of artifacts, especially finished tools, coupled with the lack of cultural features and an apparent lack of subsurface deposits" (Sanchez 1999:34). No additional impacts to site 41PS621 are anticipated from use of the Yedra Canyon Trail.

***41PS935***

Site Type: Site 41PS935 is a prehistoric rockshelter and open campsite, dating to the Early Archaic and Middle Archaic periods.

Site Area: The site measures 210 meters north-south by 290 meters east-west.

Landform: Site 41PS935 is located east and south of an intermittent tributary of upper Yedra Canyon. The rockshelter is located on the south side of a small rocky hill; the open portion of the site extends onto the lower slopes of the hill leading to the tributary. A bedrock ridge overlooks the site.

Elevation: The elevation of the site ranges from about 4,160 to 4,200 feet AMSL, with the rockshelter at about 4,200 feet AMSL.

Vegetation: Creosotebush and various thorny brush, as well as yucca and mixed grasses cover the open area of the site, providing 85 percent surface visibility.

Soil Type: The site is located within soils identified by the USDA Natural Resources Conservation Service as 70 percent Pantak and Lingua soils, 1 to 16 percent slopes, and 30 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS935 was recorded in 2004. The rockshelter measures approximately 7 meters wide by 5.5 meters deep. The maximum height of the shelter is 3.5 meters at the drip line. Midden-stained soils, burned rocks, and chipped stone debitage were present on the floor of the shelter and on the talus slope, which extends about 20 meters downslope from the shelter. Artifacts were visible on the floor of the rockshelter and on the talus slope, and could extend more than 20 centimeters below the ground surface in both locations.

Artifacts: Burned rocks, chipped stone debitage, one metate, one metate fragment, three mano fragments, one Early Archaic Pandale dart point fragment, and one Middle Archaic contracting stem dart point fragment (untyped) were identified at 41PS935. The projectile point fragments were recovered for curation. The chipped stone items were manufactured from a variety of materials, including chert, chalcedony, and jasper.

Disturbances: The open area of the site has been impacted by colluvial/sheet erosion. The presence of javelina dung within the rockshelter suggests the possibility that at least some of the archeological deposits within the shelter, especially those near the surface, have been disturbed as a result of rooting. The cultural deposits are estimated to be 70 percent intact in the shelter and 30 percent intact in the open area of the site.

Significance: The research potential of the 41PS935 is moderately high. The site merits designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information) and Criterion 5 (susceptibility to vandalism).

Recommendations: The most significant cultural deposits at 41PS935 are within the rockshelter and on the associated talus slope. The remainder of the site consists of a diffuse lithic scatter that is bisected by the trail route; this

part of the site is unlikely to elicit the attention of trail users. Nonetheless, at a minimum, this site should be monitored biannually and nominated for designation as an official State Antiquities Landmark.

***41PS936***

Site Type: Site 41PS936 is a multi-component Middle Archaic, Late Archaic, and Protohistoric/Historic open campsite.

Site Area: The site measures 320 meters north-south by 340 meters east-west.

Landform: Site 41PS936 is situated near Ojo de Papalote Alto Spring a spring in upper Yedra Canyon.

Elevation: The elevation of the site ranges from about 3,840 to 3,880 feet AMSL.

Vegetation: Several cottonwood trees and oak trees are located in the vicinity of the spring near 41PS936, and dense thorny brush line the drainage. Creosotebush, ocotillo, and yucca cover the slopes of the canyon. Surface visibility is approximately 90 percent on the canyon slopes and about 5 percent along the drainage.

Soil Type: The site is located within an area identified as 60 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes; 35 percent Horsetrap–Bofecillos-Rock outcrop complex, 1 to 12 percent slopes; and 5 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS936 was recorded in 2004. Cultural features recorded consist of a bedrock outcrop with at least two smoothed grinding surfaces, and a probable mortar hole. In addition, an area of gray midden soil, approximately 60 meters in diameter, was noted in the southwest part of the site, and a concentration of chipped stone debitage was observed in the northeast part of the site. A sparse lithic scatter covers the central part of the site. The maximum thickness of the archeological deposits at 41PS936 is estimated to be greater than 10 centimeters.

Artifacts: Artifacts recorded at 41PS936 include one Middle Archaic Bulverde dart point fragment, one Late Archaic expanding stem dart point fragment (untyped), one untyped Paleoindian dart point, one untyped dart point fragment, one metate fragment, one mano fragment, three unifaces, and burned rocks. The projectile points were recovered for curation. Several lithic material types are represented in the prehistoric artifact assemblage, including white and clear chalcedony, jasper, and brown chert. Seventeen Conchos Plain sherds were recovered from 41PS936.

Disturbances: The site has been impacted by colluvial/sheet erosion, as well as previous livestock use of the area and the establishment of ranch roads through the site. The site is estimated to be approximately 60 percent intact.

Significance: The research potential for site 41PS936 is moderately high, and the site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information) and Criterion 5 (susceptibility to vandalism).

Recommendations: Midden deposits on this site are not directly visible from the Yedra Canyon Trail route, but the trail does cross the sparse artifact scatter in the central part of the site. This diffuse artifact scatter is unlikely to elicit the attention of trail users. Nonetheless, annual monitoring of this site is recommended. In addition, 41PS936 should be nominated as an official State Antiquities Landmark.

***41PS937***

Site Type: Site 41PS937 is a multi-component Late Paleoindian, Late Archaic, Late Prehistoric open campsite, and Historic (early twentieth century) herding camp.

Site Area: The site measures 430 meters north-south by 410 meters east-west.

Landform: Site 41PS937 consists of three artifact concentrations on low colluvial slopes/terraces adjacent to the Yedra Canyon drainage. Intervening areas between artifact concentrations are bedrock exposures.

Elevation: The elevation of the site ranges from about 3,640 to 3,720 feet AMSL.

Vegetation: Sparse woody shrubs cover most of the site; riparian vegetation near the springs includes cottonwood trees. Surface visibility is 50 to 80 percent.

Soil Type: The site is located within an area identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS937 was recorded in 2004. Cultural features recorded at this site include two clusters of burned rocks that represent the remnants of hearths and two burned rock scatters that may represent displaced hearths or possible roasting oven debris. An extensive burned rock scatter in the south part of the site was not designated as a feature. In association with these features are three distinguishable artifact scatters. The thickness of the cultural deposit at 41PS937 is estimated to be 10 centimeters or more.

Artifacts: Prehistoric artifacts observed at this site consist primarily of decorticate debitage, but cores, bifaces, unifaces, and a few manos and metates were also noted. Eight projectile points were recovered: one Untyped Late Paleoindian dart point, one Late Paleoindian Angostura point, one Late Archaic Palmillas dart point fragment (Form 1), one Late Archaic Palmillas dart point (Form 2), one Late Archaic Ensor dart point, one untyped Archaic dart point, one Late Prehistoric Scallorn arrow point, and one Late Prehistoric Garza arrow point fragment. The historic artifacts at 41PS937 were noted along the southwest edge of the site and include five blue transferware Willow pattern, a pressed glass pitcher handle, amber glass, aqua glass, solarized glass, tin can fragments, tin can lid with "NELSON MORRIS CO. LARD REFINERS CHICAGO," and a .30-.30 Winchester cartridge. The context and nature of the historic artifact assemblage suggests that it may have been associated with a small, early twentieth century herding camp.

Disturbances: The site, estimated to be approximately 50 percent intact, has been impacted by colluvial/sheet erosion, as well as previous livestock use of the area and the establishment of ranch roads through the site.

Significance: The research potential of 41PS937 is moderately low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The southern portion of 41PS937 will not be readily visible to trail users, but the diffuse artifact scatter in the north part of the site is crossed by the trail route. However, the diffuse scatter of artifacts in this area is unlikely to elicit the attention of trail users. Although the research potential of 41PS937 is moderately low, annual monitoring of this site is recommended, with continued documentation and recovery of time-diagnostic projectile points as they are encountered.

***41PS938***

Site Type: Site 41PS938 is an Early Archaic and Middle Archaic lithic scatter.

Site Area: The site measures 100 meters north-south by 70 meters east-west.

Landform: Site 41PS938 is situated on a gentle slope adjacent to Yedra Canyon. Low hills rise to the west, and a deep canyon dissects the slope to the southwest.

Elevation: The elevation of the site ranges from about 3,700 to 3,710 feet AMSL.

Vegetation: Site 41PS938 has a sparse cover of woody shrubs and cacti, providing approximately 80 percent surface visibility.

Soil Type: The site is located within an area identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS938 was recorded in 2004. This site consists of a small, discrete lithic scatter. No cultural features were identified. The site is situated on a non-aggrading ground surface, suggesting that the archeological deposits are probably limited primarily to the surface or very shallowly buried at a depth of less than 10 centimeters.

Artifacts: The artifact assemblage at 41PS938 includes chipped stone debitage (primarily decorticate flakes), one core, one formal uniface, a few biface fragments, and a few scattered burned rocks near the south end of the site. In addition, an Early Archaic Pandale point and a Middle Archaic Langtry point were recovered from the site. The Pandale point was produced from brown jasper, while the Langtry point was manufactured from a tan chert.

Disturbances: Sheet erosion was evident down the slopes to the east, north and south. The site is estimated to be only about 40 percent intact.

Significance: The research potential of 41PS938 is low. The site does not merit designation as an official State Antiquities Landmark.

Recommendations: The site is on a landform that overlooks the Yedra Canyon Trail route, and is unlikely to be noticed by trail users. No further work is recommended at 41PS938.

***41PS939***

Site Type: Site 41PS939 is a Middle Archaic and Late Archaic open campsite.

Site Area: The site measures 30 meters north-south by 40 meters east-west.

Landform: Site 41PS939 is on a slight knoll on the lowest slope of a colluvial ridge, overlooking the south side of a horseshoe bend in an intermittent tributary of Leyva Canyon. The site overlooks the drainage to the north, east and west, and is situated about five to 10 meters above the bed of the drainage.

Elevation: The elevation of the site is about 3,620 feet AMSL.

Vegetation: Vegetation is predominantly creosotebush and ocotillo. Surface visibility is approximately 90 percent.

Soil Type: The site is located within an area identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS939 was recorded in 2004. Cultural features include a 4 by 2 meter concentration of approximately 12 rocks and a metate, located near the center of the site, and a probable cache of six bifaces positioned in a 20 centimeter semicircle, also centrally located. These features are encompassed by a dense lithic scatter. The archeological deposits at 41PS939 appear to be limited to the ground surface.

Artifacts: Three dart points were recovered: a Middle Archaic Langtry, a Middle Archaic contracting stem untyped fragment, and a Late Archaic Conejo. Approximately five or more thick biface fragments, not associated with the biface cache, also were noted. In addition to the rocks, metate, and bifaces, numerous pieces of chipped stone debitage of various chert types were noted scattered across this site.

Disturbances: The site, estimated to be approximately 70 percent intact, has been impacted by colluvial erosion, as well as previous livestock use of the area.

Significance: The research potential of site 41PS939 is low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: Site 41PS939 is located 300 meters from the Yedra Canyon Trail route, and is unlikely to be noticed by trail users. If the site is found to be in jeopardy from park visitors, mitigation strategies may include excavation of the area around the biface cache to determine if there are more artifacts associated with the cache. Otherwise, no further work is recommended at 41PS939 at this time.

***41PS940***

Site Type: Site 41PS940 is an Early Archaic open campsite.

Site Area: The site measures 90 meters north-south by 50 meters east-west.

Landform: The site is located on a flat knoll immediately west of the Yedra Canyon drainage, between two prominent landforms to the southwest (4,824 feet AMSL) and to the northeast (4,168 feet AMSL).

Elevation: The elevation of 41PS940 ranges from about 3,710 to 3,720 feet AMSL.

Vegetation: The site is sparsely covered with creosotebush, opuntia, cholla, and sage, allowing approximately 95 percent surface visibility.

Soil Type: The site is located within an area identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS940 was recorded in 2004. A scattered hearth feature, measuring approximately 3 by 2 meters in diameter was recorded on the west edge of a dense lithic concentration. The site is situated on an apparent non-aggrading surface, suggesting that the maximum depth of archeological deposits at 41PS940 is no more than about 10 centimeters.

Artifacts: Artifacts observed at 41PS940 include chipped stone debitage of various material types and utilized flakes. One Early Archaic Baker/Uvalde dart point was recovered for curation.

Disturbances: The site has been impacted by erosion, and is approximately 60 percent intact.

Significance: The research potential of 41PS940 is low and the site does not meet State Antiquities Landmark designation criteria.

Recommendations: The site is on a landform that overlooks the Yedra Canyon Trail route, and is unlikely to be noticed by trail users. No further work is recommended at 41PS940.

***41PS941 (Cueva Larga)***

Site Type: Site 41PS941 is a rockshelter with pictographs, an open campsite with Middle Archaic and Late Prehistoric components, and a twentieth century herding complex.

Site Area: The site measures 340 meters north-south by 450 meters east-west.

Landform: This site is focused on a large rockshelter located in a south-facing bluff, but also extends onto slopes below the shelter and toward a spring in the drainage below.

Elevation: The elevation of 41PS941 ranges from about 3,780 to 3,890 feet AMSL.

Vegetation: Riparian vegetation grows along drainages and at the base of the bluff containing the rockshelter. Woody shrubs characterize the vegetation elsewhere on the site. Surface visibility is about 60 to 80 percent.

Soil Type: The site is located within an area identified as 60 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes, 30 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes, and 10 percent Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS941 was recorded in 2004. The rockshelter measures 23 meters by 23 meters inside the drip line. The shelter includes three pictograph panels and a bedrock mortar. Talus/midden deposits are evident immediately below the shelter and at the base of the bluff to the west of the shelter entrance. The matrix inside the rockshelter and in the talus deposits is darkly stained. Other cultural features documented at 41PS941 include eight mortar holes in the creek bed below the shelter, and bedrock metates on a boulder west of the shelter. Historic herding features include dry laid rock walls and over 100 chiqueras—small rock structures, composed of three or four rocks, used to shelter baby goats. This feature type apparently is no longer used in the United States and perhaps no longer used in Mexico. Most of the chiqueras still retain fainted red painted numbers, said by former ranch hands in the area to have been used to match the baby goats with their mothers when the mothers were brought back from grazing at the end of the day. A diffuse to dense scatter of artifacts covers the site. Archeological deposits within the rockshelter and on the talus slope in front of the shelter could be more than 20 centimeters in depth.

Artifacts: Artifacts documented at 41PS941 include a diffuse to dense scatter of chipped stone debitage, a thin bifacial knife and other bifaces, unifaces, cores, a few manos and metates, burned rocks, an undecorated prehistoric pottery sherd, three dart points, and an arrow points. The projectiles were identified as a Middle Archaic contracting stem dart point, a Middle Archaic Pedernales-like dart point, an untyped Archaic dart point, and an untyped Late Prehistoric arrow point. Various lithic material types, including white chert, tan chert, brown chert, and brown jasper, were evident within the artifact assemblage. Historic artifacts noted include two weathered yoke fragments on the ranch road leading to the rockshelter. The thin bifacial knife, pottery sherd, and four projectiles were sketched in the field and are thought to have been collected; however, the artifacts were misplaced prior to cataloging in the Austin lab.

Disturbances: Intermittent water from a pour-off on the bluff that houses the rockshelter has eroded away the center of the talus deposit, and sheet erosion has caused some impact to the remainder of the open site area. Additional impacts include the establishment of a ranch road across part of the site, and use of the rockshelter by historic goat herders. The site is estimated to be approximately 40 percent intact.

Significance: Despite extensive impacts to 41PS941, the research potential of the site is

moderately high. The site was designated as an official State Archeological Landmark on October 26, 2006.

Recommendations: The Yedra Canyon Trail route crosses the west edge of 41PS941 and the rockshelter at this site is clearly visible from the trail. The historic chiquera structures on the site are also readily evident from the shelter and the routes that lead to it. The site has considerable interpretive potential to illustrate prehistoric subsistence, settlement, and belief systems, as well as historic herding practices, and interpretation of the site will help protect it from vandalism (cf. Donald 2003). Since the recording of 41PS941 in 2004, an interpretive panel, with a stewardship message, has been placed at the site. In addition, the site has been designated as an official State Archeological Landmark. The condition of the site will be monitored at least biannually.

***41PS942***

Site Type: Site 41PS942 is a rockshelter with an unknown prehistoric component and historic (twentieth century) herding component.

Site Area: The site measures 15 meters north-south by 15 meters east-west.

Landform: The rockshelter at 41PS942 is 25 meters from the edge of a narrow drainage at the south end of Yedra Canyon. This section of the drainage is steep and rocky, and includes tinajas. The rockshelter faces west toward the canyon. The associated talus deposit drops at a moderate slope almost to the edge of the canyon.

Elevation: The elevation of 41PS942 ranges from about 3,860 to 3,870 feet AMSL.

Vegetation: Vegetation on the site includes creosotebush, leatherstem, ocotillo, Mormon tea, and sparse grasses, allowing approximately 90 percent surface visibility.

Soil Type: The site is located within an area identified as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Previous Investigations: None.

Present Investigation: Site 41PS942 was recorded in 2004. Investigators recorded a rockshelter, talus slope, and a collapsed historic rock wall in front of the rockshelter. Archeological deposits within the rockshelter could be more than 10 centimeters in depth.

Artifacts: Prehistoric artifacts observed at 41PS942 include chipped stone debitage and a metate. No temporally diagnostic prehistoric artifacts were observed on the site. Historic items noted at 41PS942 include green bottle glass fragments, flat metal, three horseshoes, and a possible flat metal griddle that was stored under a large rock on the site.

Disturbances: Disturbances at 41PS942 include an old trail that runs across the site, spalling of the shelter roof, severe erosion on the talus slope, and use of the rockshelter by historic goat herders. The site is believed to remain about 40 percent intact.

Significance: Site 41PS942 has moderately low research potential and does not meet State Antiquities Landmark designation criteria.

Recommendations: The Yedra Canyon Trail route passes 70 meters to the southwest of 41PS942 and the rockshelter is visible from the route, but the site is separated from the trail by a deeply incised canyon that is nearly impassable. Therefore, the site is unlikely to be disturbed by most trail users. Nonetheless, 41PS942 will be monitored annually to assess the condition of the site.

## 2005 FIELD SEASON

### Old Entrance Trail

The Old Entrance Trail utilizes approximately 7.5 miles of an existing unimproved two-track road, approximately eight feet in width, in the interior of the park. The trail forms a loop from the main park road near the Rancho Viejo site, back to the main park road near the Agua Adentro corrals (Figure 12). This trail includes one primitive campsite, less than one acre in size, located near Papalote Alto.

The TPWD Archeology Survey Team conducted the archeological survey of the proposed Old Entrance Trail corridor between February 1 and 10, 2005. The survey of this corridor encompassed approximately 464 acres, and included re-recording three previously recorded archeological sites (41PS438, 41PS476, and 41PS668) and recording 15 newly discovered sites and nine isolated finds. Site descriptions are below; site summary data can be found in Appendix A. Isolated finds are described in Appendix C.

#### *41PS438 (Rancho Viejo)*

Site Type: Site 41PS438 is a dry-stacked rock corral and historic residential site (1881–1944), and an Early and Late Archaic lithic scatter, with a Late Prehistoric or Protohistoric component.

Site Area: The site measures 260 meters north-south by 330 meters east-west, encompassing a total area of 21.2 acres.

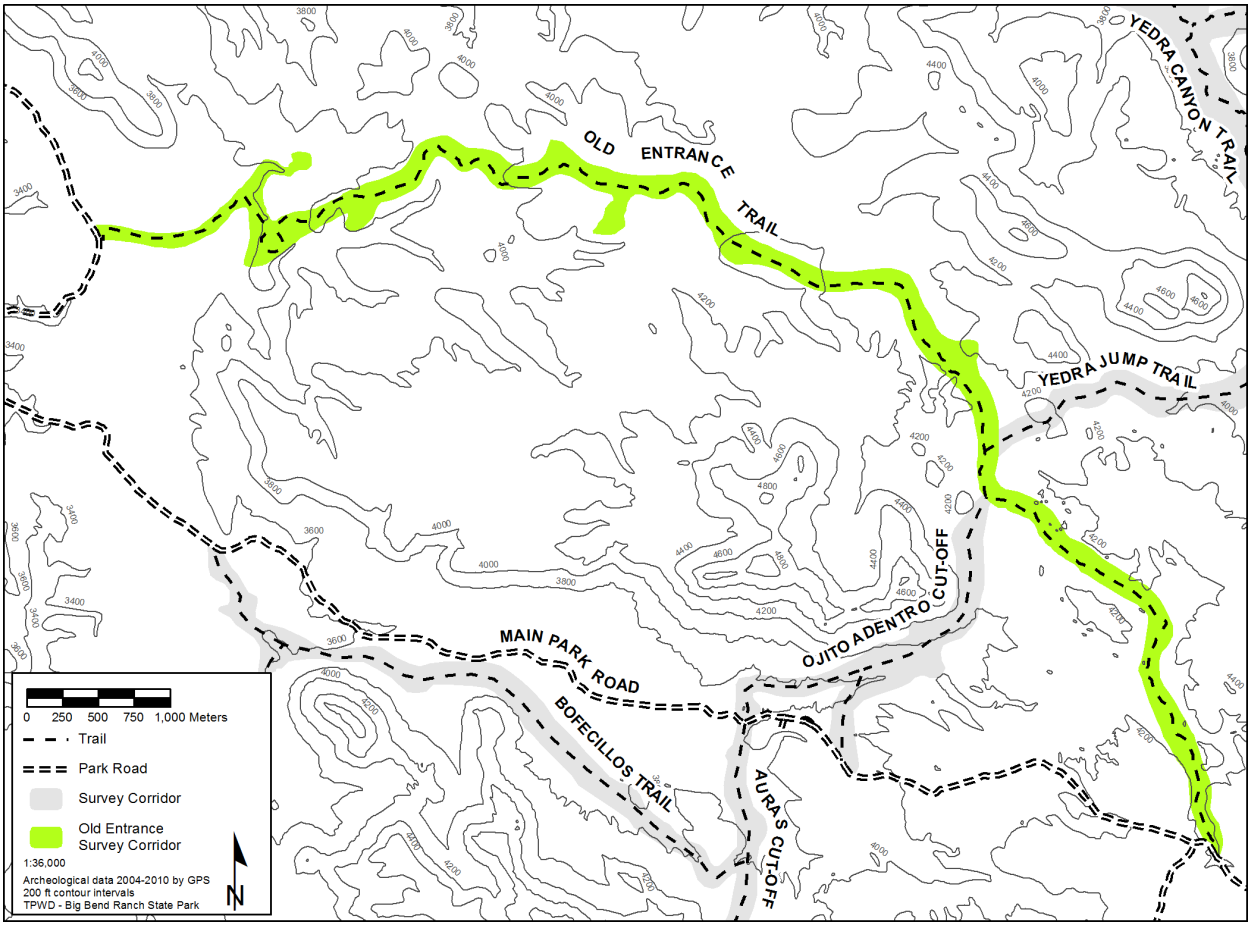


**Figure 12.** Map showing location of Old Entrance Trail.

Landform: Site 41PS438 wraps around the north and west ends of a ridge at the dissected northwest corner of a prominent plateau. A spring is located in a creek bed at the north edge of the site.

Soil Type: Soils in the site area have been mapped by the Natural Resources Conservation Service as 80 percent Corazones-Ojinaga complex, 1 to 12 percent slopes and 20 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,470 to 3,500 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and mesquite. A cottonwood tree grows near the spring. The overall surface visibility is about 50 to 70 percent.

Disturbance: Site 41PS438 has been impacted by sheet erosion across sloped portions of the site; there is deterioration of the historic structural remnants. The rock corral at this site is a marked visitor stop, and it is possible that artifact collecting has occurred.

Previous Investigations: Site 41PS438 was originally recorded in 1988 (Ing et al. 1996:200–201). Local legend attributes the rock corral on this site to Spanish occupation, but a 1932 map is the first to show the corral. By 1944, the site is described as "corral & old ruins". The site is on Nolan County School Survey 2, surveyed in 1881 (Ing et al. 1996:200–201).

Present Investigation: The site was re-recorded during the 2005 archeological survey of the Old Entrance Trail, and was also used as a practice site for Section 106 training that was being provided to TPWD staff and Natural Resources Conservation Service (NRCS) participants at BBRSP at the time of the survey. The site has one of the largest examples of a rock corral in the region. It also includes a two-room masonry structure with mud mortar. This structure includes a possible fireplace on the north wall of the east room. East of this first structure is another masonry structure that may have functioned as a goat/sheep shed, due to the low height of the walls. There was some repointing with concrete on the second structure, and wire nails were observed in the roof beams. The remains of a melted adobe structure were located north of the two- room feature. Other features at 41PS438 include a rock cairn that is approximately 2 meters in diameter, and bedrock mortars. Prehistoric and historic artifacts are scattered across the site. The maximum depth of cultural deposits on this site is estimated to be less than 10 centimeters.

Artifact Analysis: The original recorders of 41PS438 collected one Late Archaic Paisano dart point from the site. This point, which had been resharpened at least twice, was produced from gray chert that had tan inclusions. The 2005 investigation identified a number of prehistoric and historic artifacts on the site. Prehistoric artifacts include chipped stone debitage, a mano, an Early Archaic Pandale dart point, a Late Archaic Paisano dart point, and a Late Archaic Ensor dart point fragment. Two of the points were produced from tan chert, while the third was manufactured from chalcedony. Four Capote Plain earthenware sherds were identified. Historic artifacts include solarized and other glass fragments (including some pressed glass), one applied neck glass bottle, boulders wrapped with barbed wire, transferware, a decal decorated sherd, whiteware, cast iron stove parts and Dutch oven parts, patent medicine bottle "Warner Safe", a copper fence staple, hole-in-top tin cans, a repoussé sherd, a molded copper lamp part, and a saddle buckle. The projectile points and earthenware sherds were recovered from the site for curation.

Significance: This site has moderately high research value, and was previously designated an official State Archeological Landmark on September 20, 1991.

Recommendations: Site 41PS438 is situated about 550 meters south of the proposed Old Entrance Trail route, and is not likely to face additional impact as a result of trail use on the Old Entrance Trail. Nonetheless, this site would benefit from the recording and stabilization of structural features, and additional oral history research to ascertain the history of land ownership. Annual monitoring is recommended.

***41PS476***

Site Type: Site 41PS476 is an Early Archaic and Late Archaic lithic scatter, and historic rock wall.

Site Area: The site measures 320 meters north-south by 140 meters east-west, encompassing a total area of 11.06 acres.

Landform: Site 41PS476 is situated on an upland flat between two low ridges. Rockshelters located along the ridges do not contain any prehistoric cultural material, but a historic rock wall is associated with the westernmost shelter.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 33 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes, 33 percent Pantak and Lingua soils, 1 to 16 percent slopes, and 33 percent Pantak and Lingua soils and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is about 4,160 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and sotol. The overall surface visibility is nearly 100 percent.

Disturbance: An undeveloped ranch road, known as the Old Entrance Road, cuts through the site. Previous investigators also noted artifact collecting on this site.

Previous Investigations: Site 41PS476 was originally recorded by Bruce Nightengale and J. David Ing (Ing et al. 1996).

Present Investigation: Site 41PS476 was re-recorded in 2005. Cultural features documented on the site are limited to a historic rock wall constructed at the entrance of the westernmost rockshelter at the site, and two lithic concentrations identified below a couple of the rockshelters. No artifacts were found within any of these rockshelters. The maximum depth of cultural deposits on this site is estimated to be less than 10 centimeters.

Artifact Analysis: The original recorders of 41PS476 collected one Late Archaic dart point fragment, a mano fragment, and a sample of chipped stone debitage from this light lithic scatter. The point fragment was identified as an 'Expanding Stem Form 13'. The debitage was described as primarily secondary and tertiary flakes. The 2005 investigation identified several prehistoric, as well as a few historic artifacts on the site. Prehistoric artifacts identified include chipped stone debitage, cores, bifaces, scrapers, manos, burned rocks, and two dart points, including one Early Archaic Pandale and one Late Archaic Palmillas (Form 1) and one untyped dart point. One of the points was produced from gray chert and the other was manufactured from purple chert or jasper. Historic artifacts included spent cartridges, one tin can, and a horseshoe. The projectile points were collected for curation.

Significance: Site 41PS476 is a light lithic scatter with no prehistoric cultural features, and minimal potential to contain buried cultural deposits. Although this site was designated as an official State Archeological Landmark in

1991, both the original recorders of this site and the present investigators are in agreement that this site has very low research potential.

Recommendations: Though this site falls within the proposed trail corridor, no further work is recommended. Furthermore, this site should be removed from the list of official State Archeological Landmarks. However, this site will remain protected as an unofficial state archeological landmark on BBRSP.

***41PS668 (Cielo Alto)***

Site Type: Site 41PS668 is an open campsite with Middle Archaic, Late Archaic, Late Prehistoric, and Cielo complex components.

Site Area: The site measures 345 meters southwest-northeast by 175 meters east-west, encompassing a total area of 14.92 acres.

Landform: Site 41PS668 is situated on a series of flat, level upland benches interrupted by occasional outcrops of igneous bedrock. The site overlooks the north side of an unnamed canyon.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from approximately 4,040 to 4,080 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, leatherstem, lechuguilla, acacia, sotol, Torrey yucca, various opuntias, and fluff grass. The overall surface visibility is about 75 percent.

Disturbance: The site has been impacted to some extent by erosion and trampling by livestock. The original recorders of this site indicated that the site had been extensively collected, and that most diagnostic artifacts were missing; however, at least 21 projectile points or point fragments were collected by the original recorders, and 16 projectile points were recovered during the present investigation.

Previous Investigations: After being informed of the location of this site by Clay Webb, a seasonal employee with TPWD at the time, J. David Ing and Robert Mallouf officially recorded this site in November 1994. Ing and Mallouf noted at least 10 circular to oval stacked rock Cielo structures, at least four possible rock cairn burials, numerous bedrock mortars and grinding facets, and hearths scattered across the site. At least 21 projectile points or point fragments were collected during the 1994 site investigation. These points include Late Archaic and Late Prehistoric specimens, as well as one Middle Archaic dart point. Other artifacts observed on the site at that time include an abundance of chipped stone debitage (mostly secondary and tertiary flakes), one flake graver, two abraders, and one fragment of freshwater mussel shell. The chipped stone artifacts were produced primarily from a variety of local cherts, chalcedony, and opalite. One flake was produced from obsidian of unknown origin. The abraders were manufactured from locally available scoria. No subsurface testing was conducted at 41PS668 during the initial investigation of the site. A year later, in November 1995, researchers returned to the Cielo Alto site to map it using a Pentax total station and 50 centimeter contour intervals. During the mapping of the site, approximately 19 stacked rock Cielo features, 10 possible cairn or slab burials, and a relatively large number of projectile points or point fragments dating to the Late Archaic and Late Prehistoric periods were identified (Ing 1996:13–14). The site was subsequently reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996).

Present Investigation: Site 41PS668 was re-recorded in 2005. Cultural features observed on the site during the 2005 investigation include at least 19 Cielo residential structures, 11 rock cairns, seven rock pavements, one rock alignment, one burned rock scatter, and two modern or unidentified features. An extensive artifact scatter, discussed below, was noted across the entire site. The maximum depth of cultural deposits on this site is estimated to be at least 10 centimeters.

Artifact Analysis: The original recorders of 41PS668 collected at least 21 projectile points or point fragments, one dart point preform, one flake graver, one obsidian flake, and two abraders (including one shaft abrader) from the site. The projectile points, produced from various cherts and chalcedony, include Almagre, Shumla, Mexican, Perdiz, and other unnamed points. Ing and Mallouf also noted the presence of manos, metates (both bedrock and slab), considerable debitage (mostly secondary and tertiary flakes of chalcedony, opalite, and chert), and a fragment of freshwater mussel. The 2005 investigation also identified an abundance of chipped stone debitage, as well as cores, bifaces, scrapers, manos, metates, and burned rocks. Eleven dart points and four arrow points were recovered during the 2005 investigation, as were two unidentifiable projectile point fragments. They were identified as two Middle Archaic Arenosa dart points, one Late Archaic Paisano dart point fragment, one Late Archaic Palmillas dart point fragment (Form 1), one Late Archaic expanding stem dart point (untyped), one Late Archaic expanding stem dart point fragment (untyped), one Late Archaic Ensor dart point fragment, four Late Archaic Figueroa dart points, one untyped dart point, two untyped dart point fragments, two Late Prehistoric Scallorn arrow points, one Late Prehistoric Scallorn arrow point fragment, and one Late Prehistoric Garza arrow point fragment.

Significance: Site 41PS668 is a large site with numerous cultural features and an extensive artifact scatter that includes a range of diagnostic projectile points. The site has high research potential, and was designated an official State Archeological Landmark in 2006.

Recommendations: All of the cultural features on this site are located in the southern one-half of the site and are not visible from the Old Entrance Trail. However, the northern tip of the artifact scatter at 41PS668 does come close to the existing ranch road (i.e., the Old Entrance Trail). It is possible that the artifacts in this area could draw the attention of some trail users, potentially drawing them further onto the site. As a result, it is recommended that this site initially be monitored on at least a quarterly basis. If vandalism of this site becomes evident, then mitigation measures should include the excavation of select Cielo habitation features for the purpose of data recovery.

***41PS958 (Papalote Alto)***

Site Type: Site 41PS958 is a Middle Archaic open campsite and a historic (circa 1961–1988) herding complex.

Site Area: The site measures 310 meters northwest-southeast by 120 meters northeast southwest, encompassing a total area of 9.2 acres.

Landform: This site is focused on an upland hill summit that overlooks an unnamed canyon.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS958 is approximately 4,200 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, leatherstem, lechuguilla, acacia, sotol,

Torrey yucca, various opuntias, and fluff grass. Surface visibility is variable, ranging from about 75 to 100 percent.

Disturbance: The prehistoric component at this site have been impacted by the historic component, including the construction of a windmill, two rock pilas, barbed wire fencing, and the placement of two metal pilas on the site. In addition, animal burrowing and trampling is evident across the site. Despite these impacts, the overall site remains approximately 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS958 was recorded in 2005. Cultural features on the site are limited to the historic structures, including a windmill with pumpjack, two rock pilas (both 5.5 feet in height, with cement mortar joints on the exterior and solid cement interior), two metal pilas (both 1.5 feet in height), and barbed wire fencing. In addition, there are stacks of rocks, sorted by size, presumably gathered for building material when constructing the rock pilas. No prehistoric features were observed. A diffuse to moderately dense scatter of historic artifacts covers the site, with a concentration around the location of the windmill. Cultural deposits appear to be limited to the surface.

Artifact Analysis: Prehistoric artifacts recorded at 41PS958 include a diffuse to moderately dense scatter of chipped stone debitage and debris, cores, various bifaces, scrapers, drills, and projectile points. The projectile points were collected and identified as three Middle Archaic Almagre dart points or dart point fragments, one Middle Archaic Arenosa dart point fragment, one Middle Archaic Jora dart point fragment, and two Middle Archaic contracting stem dart point fragments (untyped). Various lithic material types, including white chert, tan chert, red-brown chert, and gray chert, are evident within the artifact assemblage. Historic artifacts identified at this site include a windmill blade fragment, cables, a metal bucket, sardine cans, one hole-in-top can, pop-top beer cans and other miscellaneous aluminum cans, oil cans, a gas can, brown and clear glass fragments, shock absorbers, several collars for drill pipe, and two perforated barrel lids.

Significance: Although the overall site condition, including the historic component, is good at 41PS958, the research potential at this site is considered moderately low. There are no prehistoric features at this site, and the artifacts appear to be limited to the ground surface. One of the rock masonry pilas is marked with the Diamond A symbol, dating this feature, and probably much if not all of the historic component at 41PS958 to the period when Big Bend Ranch was owned by Robert Anderson from 1961 to 1988. Windmills and tanks of this era are not rarities in the Big Bend region, and provide little in the way of research opportunities. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: A proposed primitive campground in the vicinity of Papalote Alto was established on the north side of the Old Entrance Trail, off of site 41PS958. No further work is recommended at 41PS958.

***41PS959 (Gaze)***

Site Type: Site 41PS959 consists of three rockshelters of unknown prehistoric cultural age.

Site Area: The site measures 60 meters north-south by 65 meters east-west, encompassing a total area of 0.96 acres.

Landform: The rockshelters at this site are situated in the south-facing wall of an unnamed canyon. Two of the rockshelters and an associated bedrock mortar are actually located near the canyon floor.

Soil Type: Natural Resources Conservation Service soil maps identify the soil unit in the site area as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS959 ranges from about 3,560 to 3,640 feet AMSL.

Vegetation: The site is covered primarily by leatherstem, lechuguilla, creosote, sotol, Torrey yucca, various opuntias, and fluff grass. Surface visibility is variable, ranging from as low as 75 percent in some places outside of the rockshelters to 100 percent inside the rockshelters.

Disturbance: One of the lower-lying rockshelters has been scoured almost clean of any deposits and another rockshelter has evidence of animal disturbance. Other open portions of the site have been impacted by erosion. The site appears to be approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS959 was recorded in 2005. Rockshelter #1, the shelter located highest on the canyon wall, measures about 7 meters long, 4 meters deep, and 2.5 meters high. This shelter has sediment to at least five centimeters in depth, and the ceiling appears to be sooted. One flake was found on the floor of the shelter. A talus is evident outside the entrance of shelter #1 and extends almost to the canyon floor (12 by 30 meters long). The matrix of this talus is slightly gray and contains a few pieces of chipped stone debitage and debris, a uniface, and some burned rocks. Rockshelter #2, located near the floor of the canyon, measures about 15 meters long, 2.5 meters deep, and 2 meters high. The floor of this shelter is mostly bedrock, but includes a few pockets of sediment which are probably of recent origin. One metate was discovered within the shelter. An area of talus, measuring about 7.7 meters in diameter, was observed outside the entrance of shelter #2. The talus consists primarily of natural rock, with some burned rock; the matrix was dark gray. One flake was found below this talus slope, and one flake was found upslope from the entrance to shelter #2. In addition, one bedrock mortar was observed on the canyon floor immediately west of shelter #2. Rockshelter #3, also located low on the canyon wall, measures about 7 meters long, 4 to 5 meters deep, and 1.5 meters high. This shelter contains at least 20 centimeters of sediment near the entrance, but the uppermost 10 centimeters appear to be compacted manure.

Artifact Analysis: Artifacts observed at 41PS959 are relatively sparse, and include chipped stone debitage and debris, cores, bifaces, scrapers, burned rocks, and one metate.

Significance: This rockshelter site of unknown prehistoric age has moderate research potential. The site includes three rockshelters, two of which have associated talus deposits. One rockshelter, shelter #2, also has an associated bedrock mortar. Two of the rockshelters contain sediment that may include archeological deposits. Site 41PS959 meets State Antiquities Landmark Criterion 1 (potential to contribute important information) and is recommended for nomination.

Recommendations: Although the Old Entrance Trail is located nearly 250 meters southwest of site 41PS959 at its nearest point, the rockshelter that is situated high on the canyon wall is clearly visible from the trail corridor and may elicit the attention of some trail users. As a result, the condition of this site should be monitored at least biannually to ensure that the rockshelter deposits and talus deposits are not being vandalized. The site should be nominated for official State Antiquities Landmark designation.

***41PS960 (Wayward)***

Site Type: Site 41PS960 is a rockshelter of unknown prehistoric age.

Site Area: The site measures 5 meters north-south by 5 meters east-west, encompassing a total area of .006 acre.

Landform: The rockshelter is located in a large boulder of Rancho Viejo Tuff on an upland footslope.

Soil Type: Natural Resources Conservation Service soil maps identify the soil unit in the site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS960 is about 3,600 feet AMSL.

Vegetation: The site is covered primarily by leatherstem, lechuguilla, creosote, sotol, Torrey yucca, various opuntias, and fluff grass. Surface visibility is variable, ranging from as low as 75 percent outside the rockshelter to 100 percent inside the shelter.

Disturbance: The floor of the shelter has been impacted by animal burrowing and trampling, and the talus outside the shelter has been impacted by the construction of a former road across the slope below the shelter and by subsequent erosion.

Previous Investigations: None.

Present Investigation: Site 41PS960 was recorded in 2005. The site assessment consisted primarily of surface inspections, although a small trowel test was excavated inside the rockshelter. The rockshelter measures about 3 meters long, 1 meter deep, and 1.2 meters high. This shelter has gray stained sediment to at least 10 centimeters in depth. A broken half of a deep basin metate and a chipped stone core were observed in a narrow band of talus downslope from the shelter. An undeveloped road that had once crossed the slope below the shelter has cut away most of the talus below the shelter. The remaining talus measures 4 meters by 5 meters in area.

Artifact Analysis: Artifacts at this site are limited to the deep basin metate fragment and a chipped stone core, both of which were produced from locally available materials.

Significance: This rockshelter of unknown prehistoric age has moderately low research potential. Only two artifacts, neither of which is temporally diagnostic, were observed on the surface of this site. Furthermore, there is minimal potential for buried archeological deposits to exist on this site. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No additional work is recommended at 41PS960.

***41PS961 (Long Walk)***

Site Type: Site 41PS961 is a rockshelter with a Late Archaic occupation.

Site Area: The site measures 50 meters north-south by 40 meters east-west, encompassing a total area of 0.49 acre.

Landform: Site 41PS961 is located on a south-facing upland backslope that overlooks an unnamed intermittent drainage.

Soil Type: The Natural Resources Conservation Service has identified soils in the site area as 60 percent Studybutte-Rock outcrop complex, 10 to 30 percent slopes and 40 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,640 to 3,680 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the open area around the site, providing 80 percent surface visibility.

Disturbance: The open area of 41PS961 has been impacted by colluvial and sheet erosion, and the rockshelter deposits have evidence of animal burrowing. The site remains approximately 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS961 was recorded in 2005. Recorders identified a rockshelter with four associated bedrock mortars and one bedrock metate, an untyped Archaic dart point, and a slab metate outside the rockshelter. The rockshelter measures approximately 28 meters wide, 3 meters deep, and 2.4 meters high. The floor of the rockshelter includes gray midden soil with burned rocks in the west half of the shelter and bedrock with thin, non-cultural deposits and extensive cow manure in the east half. The associated talus slope includes dark gray midden soil, burned rocks, chipped stone debitage and debris, two mano fragments, and the aforementioned dart point. The slab metate was found upslope from the rockshelter. Artifacts could extend more than 15 centimeters below the ground surface within the talus deposits.

Artifact Analysis: As noted, burned rocks, chipped stone debitage and debris, mano fragments, one untyped Late Archaic dart point, and one slab metate were identified on the site. The projectile point was recovered from the site for curation. All items were produced from locally available materials.

Significance: This Late Archaic site has moderate research potential. Much of the site remains intact and has some potential for buried archeological deposits in the west half of the rockshelter, as well as on the talus slope. The site is recommended for nomination as a State Antiquities Landmark under Criteria 2 and 5.

Recommendations: The rockshelter at 41PS961 is about 425 meters from the Old Entrance Trail, but is visible from the trail corridor and may elicit the attention of some trail users. As a result, the condition of this site should monitored at least biannually to ensure that the rockshelter deposits and talus deposits are not being vandalized. The site should be nominated as a State Antiquities Landmark.

***41PS962 (Doghouse)***

Site Type: Site 41PS962 is a boulder shelter with an unknown prehistoric occupation.

Site Area: The site measures 10 meters north-south by 13 meters east-west, encompassing a total area of 0.03 acre.

Landform: Site 41PS962 is situated on an upland finger ridge overlooking Palo Amarillo drainage.

Soil Type: The Natural Resources Conservation Service has identified soils in the site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS962 is about 3,660 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the site, providing 80 to 100 percent surface visibility.

Disturbance: The deposits inside the shelter have evidence of animal burrowing. The site remains approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS962 was recorded in 2005. The shelter, which has two east-facing openings measuring 0.6 to 1 meter in diameter, is approximately 5 meters long, 2.5 meters deep, and 1 meter high. The floor of the shelter is covered by 10–15 centimeters of sediment, and approximately 12 rocks are

stacked against the wall just inside the southernmost opening. The rocks did not appear to be the remnants of a rock wall. No other cultural features were observed at this site. A sparse lithic scatter was found in association with the boulder shelter.

Artifact Analysis: The lithic scatter at this site includes chipped stone debitage and debris, one biface fragment, and a few possible burned rocks. In addition, a shaped gourd (*Cucurbit* sp.) fragment was recovered from the floor of the shelter.

Significance: Site 41PS962 has moderate research potential. There is some potential for buried archeological deposits in the shelter and, based on the presence of a shaped gourd fragment on the floor of the shelter, there is the possibility that additional perishable items are present within the shelter deposits. The site is recommended for designation as an official State Antiquities Landmark under Criteria 1 and 5.

Recommendations: The shelter at 41PS962 is near the Old Entrance Trail and may elicit the attention of some trail users. As a result, the condition of this site should be monitored at least biannually to ensure that the rockshelter deposits and talus deposits are not being vandalized. In addition, this site should be nominated for designation as an official State Antiquities Landmark.

***41PS963 (Small Metate)***

Site Type: Site 41PS963 is a rockshelter with unknown prehistoric occupation.

Site Area: The site measures 5 meters north-south by 3 meters east-west, encompassing a total area of 0.003 acre.

Landform: Site 41PS963 is situated on an upland backslope, about 25 meters upslope from the Old Entrance Road.

Soil Type: Soils within the site area have been mapped by the Natural Resources Conservation Service as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS963 is about 3,680 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the site, providing 80 to 100 percent surface visibility.

Disturbance: The non-cultural deposits inside the shelter have evidence of animal burrowing. The site is estimated to be approximately 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS963 was recorded in 2005. The shelter, which has a west-facing entrance, is approximately 4 meters long, 2.5 meters deep, and 0.75 meters high. The floor of the shelter is covered by at least 10 centimeters of non-artifact bearing soil and gravels. No other cultural features were observed on this site.

Artifact Analysis: The only artifact observed at 41PS963 is a flat, sub-triangular cobble, measuring 20 centimeters in length and width, which had slightly depressed grinding surfaces on both faces.

Significance: Site 41PS963 has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS964 (Gemini)***

Site Type: Site 41PS964 is a rockshelter with unknown prehistoric and historic occupations.

Site Area: The site measures 4 meters north-south by 5 meters east-west, encompassing a total area of 0.006 acre.

Landform: Site 41PS964 is situated on an upland backslope, about 5 meters northeast of the Old Entrance Road.

Soil Type: Soils within the site area have been mapped by the Natural Resources Conservation Service as 60 percent Studybutte-Rock outcrop complex, 10 to 30 percent slopes and 40 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS964 is about 3,600 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the site, providing 80 to 100 percent surface visibility.

Disturbance: The shelter deposits have been very disturbed by animals; the site appears to be less than 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS964 was recorded in 2005. The shelter is approximately 3 meters wide, 2.5 meters deep, and 1.1 meter high. The floor of the shelter is covered by approximately 10–20 centimeters of what appears to be non-artifact bearing soil. A rock wall remnant, approximately 1.1 meter in height, is evident in front of the rockshelter. This feature appears to have once extended across the entire shelter entrance.

Artifact Analysis: Prehistoric artifacts observed at 41PS964 are limited to two chipped stone flakes on the slope in front of the shelter. A clear glass bottle fragment and recent animal bone were found on the floor of the shelter.

Significance: Site 41PS964 has moderately low research potential, and does not meet the criteria for nomination as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS965 (Twin)***

Site Type: Site 41PS965 is a rock overhang with an unknown prehistoric occupation.

Site Area: The site measures 3 meters northeast-southwest by 3 meters northwest-southeast, encompassing a total area of 0.002 acre.

Landform: Site 41PS965 is situated on an upland backslope overlooking the Old Entrance Trail.

Soil Type: Soils within the site area have been mapped by the Natural Resources Conservation Service as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS965 is about 3,600 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the site, providing 80 to 100 percent surface visibility.

Disturbance: The site has been impacted by erosion and animal burrowing and trampling, and is approximately 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS965 was recorded in 2005. The rock overhang has a bedrock and gravel floor, with a maximum depth

of 10 centimeters in gravel areas. Only two artifacts, a mano and a metate, were observed on the site.

Artifact Analysis: A slab metate was observed about one meter outside the rock overhang, and a mano fragment was identified three meters downslope from the overhang.

Significance: Site 41PS965 has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS966 (Baby Cielo)***

Site Type: Site 41PS966 is a Late Archaic and Late Prehistoric (Cielo complex) habitation site.

Site Area: The site measures approximately 170 meters northeast-southwest by 80 meters northwest-southeast, encompassing a total area of 3.36 acres.

Landform: Site 41PS966 is situated on an upland summit overlooking an unnamed canyon with an intermittent drainage.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS966 site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS966 is about 3,840 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the site area, providing 80 to 100 percent surface visibility.

Disturbance: The site has been impacted by erosion, and possibly artifact collecting, but remains approximately 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS966 was recorded in 2005. The site includes at least 14 circular or crescent-shaped stacked rock Cielo habitation features, one possible rock alignment, one rock cairn, two rock pavements, including one in proximity to bedrock mortars and metates, a series of small rockshelters with associated talus slopes, and several crevices that have been filled with rocks, possibly representing crevice burials. Though no subsurface investigations have been conducted at 41PS966, the nature of the soils in this upland setting, and of Cielo complex sites, suggests that the archeological deposits on this site are likely to be thin, perhaps no greater than 10 centimeters in depth.

Artifact Analysis: Artifacts identified on this site include chipped stone debitage and debris, assorted bifaces, manos, metates, and burned rocks. In addition, one Late Archaic Shumla dart point and one untyped Late Prehistoric arrow point were recovered from the site. One of these points was unifacially worked, while the other is bifacial. Both points were produced from chalcedony, one of a white variety, and the other of a white and black type. Other artifacts were manufactured from a variety of local lithic materials, including chalcedony, chert, and jasper.

Significance: Despite the impact of erosion, and possibly artifact collecting at 41PS966, the cultural features on this site are intact and there appears to be good association between the artifacts that are visible on the ground surface and the cultural features. Furthermore, this site is one of the larger Cielo sites that have so far been identified in the interior of BBRSP. As a result, 41PS966 is considered to have moderately high research potential, and was designated an official State Archeological Landmark in 2006.

Recommendations: Site 41PS966 is located near the Old Entrance Trail, but is not readily visible from the trail route. Nonetheless, the site is located on a prominent point and may elicit the attention of some trail users. As a result, the condition of this site should be monitored at least biannually.

***41PS967 (Lonely)***

Site Type: Site 41PS967 is a lithic scatter of unknown age and a historic rock cairn.

Site Area: The site measures 90 meters east-west by 75 meters north-south, encompassing a total area of 1.67 acres.

Landform: Site 41PS967 is situated on an upland ridge summit, adjacent to the Old Entrance Trail.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS967 site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS967 ranges from approximately 3,820 to 3,840 feet AMSL.

Vegetation: Despite the lack of soil development at 41PS967, acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass are evident across the site, providing 85 to 100 percent surface visibility.

Disturbance: Site 41PS967 shows minor evidence of animal burrowing and trampling, and the Old Entrance Road/Trail cuts through the north edge of the site. The site is approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS967 was recorded in 2005. The rock cairn presumably was used to hold a former utility pole, as evidenced by slick wire located on the ground near the cairn. The utility pole is no longer in place. The remainder of the site consists of a sparse scatter of chipped stone debitage and debris, a few bifaces, and possible burned rocks. There is no depth to the archeological deposits on this site.

Artifact Analysis: Prehistoric artifacts at 41PS967 are limited to chipped stone debitage and debris, bifaces, and possible burned rocks, all of which were produced from locally available lithic material. Slick wire was also observed at the site. No artifacts were collected from 41PS967 during the 2005 investigation.

Significance: Site 41PS967 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS968 (Logan's)***

Site Type: Site 41PS968 is a Middle and Late Archaic open campsite.

Site Area: The site measures 50 meters east-west by 35 meters north-south, encompassing a total area of 0.43 acre.

Landform: Site 41PS968 is situated on an upland footslope and toeslope adjacent to the Manzanillo Canyon drainage.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS968 site area as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS968 is approximately 4,220 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the site, providing 75 to 100 percent surface visibility.

Disturbance: Disturbances at 41PS968 include animal burrowing and trampling, and the Old Entrance Road/Trail cuts through the western half of the site. Nonetheless, the site appears to be approximately 90 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS968 was recorded in 2005. Investigation of this site revealed a circular depression, approximately 0.5 meters deep by 8 meters across, at the east end of the site. This feature, the purpose of which remains unknown, is ringed on its west edge by three rock-lined hearth features. One of the hearths is partially buried. The artifact scatter is sparse to moderately dense. Despite the presence of a partially buried hearth on this site, the thin, gravelly soils on 41PS968 suggest that the depth of archeological deposits is likely to be less than 10 centimeters.

Artifact Analysis: Prehistoric artifacts recorded at 41PS968 include one Middle Archaic contracting stem dart point fragment (untyped), one Late Archaic expanding stem dart point (untyped), chipped stone debitage and debris, and metate fragments. All of these items were manufactured from various local lithic materials. In addition to the prehistoric artifacts, three tin cans were also observed on the site. Two of the projectile point fragments were collected from the site during the 2005 investigation.

Significance: Site 41PS968 is considered to have moderate research potential and is recommended for nomination as an official State Antiquities Landmark under Criteria 1 and 5.

Recommendations: Although the Old Entrance Trail crosses the west side of the site, the cultural features at 41PS968 are located at the east end of the site, out of view of the trail. Nonetheless, artifacts at this location may elicit the attention of some trail users. As a result, the condition of this site should be monitored at least biannually. In addition, 41PS968 should be nominated an official State Antiquities Landmark.

***41PS969 (Found It)***

Site Type: Site 41PS969 is a Late Prehistoric Cielo complex habitation site.

Site Area: The known site area measures 10 meters east-west by 10 meters north-south, encompassing a total area of 0.03 acre.

Landform: Site 41PS969 is situated on the summit of an upland ridge, overlooking a small unnamed canyon.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS969 is approximately 4,060 feet AMSL.

Vegetation: Acacia, lechuguilla, creosote, sotol, ocotillo, leatherstem, various opuntias, and fluff grass cover the general area, but exposed igneous bedrock at 41PS969 provides nearly 100 percent surface visibility.

Disturbance: Erosion was evident at 41PS969, but no other disturbances were observed on the site. The site is approximately 80 percent intact.

Previous Investigations: None.

Present Investigation: Although 41PS969 is located outside the Old Entrance Trail corridor, it was recorded in 2005. This site was actually encountered while searching for previously recorded site 41PS668, a large Late Prehistoric Cielo complex habitation site located in the vicinity of 41PS969. Because 41PS969 is situated outside the project corridor, minimal time was spent at this location. It is possible that addi-

tional cultural features and artifacts are present on the site, but not observed during the 2005 investigation. A single Cielo habitation feature was noted on the site. This feature measures approximately 3.5 meters east-west by 3.3 meters north-south. The rocks of this feature are stacked 2–3 courses high, with open ends on both the north and south sides of the feature. In addition, a rock cairn was also observed on the site. A sparse scatter of chipped stone debitage is associated with these features. Archeological deposits on this site were estimated to be at least 10 centimeters deep.

Artifact Analysis: The artifact assemblage observed at 41PS969 is limited to a sparse scatter of chipped stone debitage, all produced from locally available cherts.

Significance: The research potential of 41PS969 is still not fully known; further investigation could reveal additional cultural features and artifacts at this site.

Recommendations: This site is outside the proposed trail corridor and should not elicit the attention of trail users. No further work is recommended at 41PS969 at this time.

**Terneros Loop Trail**

The Terneros Loop Trail (Figure 13) follows approximately 3.35 miles of an existing unimproved two-track road approximately eight feet in width, which extends from Terneros Creek and Yedra Canyon and encircles the confluence of Terneros Creek with Leyva Canyon.

The TPWD Archeology Survey Team conducted the archeological survey of the proposed Terneros Loop Trail corridor on February 5, 8, and 9, 2005. The survey of this corridor, including buffers and locations of interest within view of the trail, encompassed approximately 398 acres. Two new sites, 41PS970 and 41PS971, were identified during the survey of the Terneros Loop Trail corridor. Two isolated finds were recorded in the corridor. Site descriptions are below and are summarized in Appendix A; isolated finds are described in Appendix C.

***41PS970 (Cueva de las Brujas)***

Site Type: Site 41PS970 includes a small cave (Cueva de las Brujas) and 12 rockshelters with Archaic and Late Prehistoric occupations, pictographs, and a historic twentieth century herding complex.

Site Area: The site measures 125 meters north-south by 260 meters east-west, encompassing a total area of 8.03 acres.

Landform: Site 41PS970 is located on an upland backslope, footslope and toeslope overlooking the Leyva Canyon drainage. The rockshelters at this site are formed in trachyte ash-flow tuff.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as 60 percent Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes, and 40 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes (USDA 2013).

Elevation: The elevation of 41PS970 ranges from about 3,640 to 3,760 feet AMSL.

Vegetation: The area outside the cave and rockshelters is covered primarily by creosote, catclaw acacia, mesquite, and Christmas cholla, providing 85 to 100 percent surface visibility.

Disturbance: Natural impacts to the site include erosion of the talus deposits, spalling of the walls in the cave and rockshelters, and fading of the pictographs. In addition, a former ranch road cuts through the site, and the

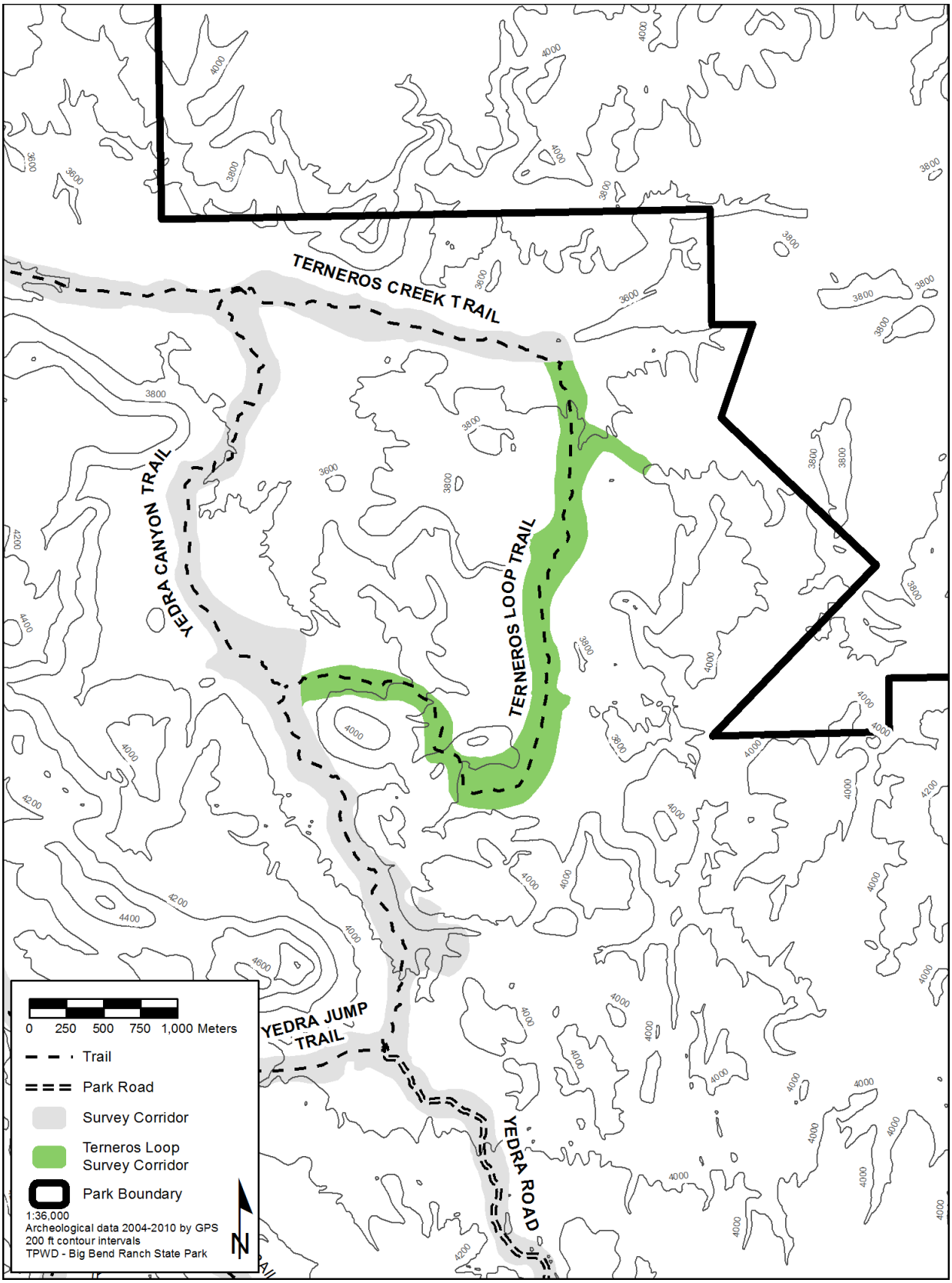


**Figure 13.** Map showing location of Terneros Loop Trail.

area was used to corral and shelter goats. The scarcity of projectile points on this site suggests that artifact collecting has also occurred. Nonetheless, the site appears to be approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS970 was recorded in 2005. Based on the temporally diagnostic artifacts recovered from the site, including two untyped Archaic dart points, one untyped Late Prehistoric arrow point, and various historic artifacts, people sought shelter at this location during at least the Middle Archaic and Late Prehistoric periods, and more recently by twentieth century goat herders. Other cultural evidence left behind by the former inhabitants at 41PS970 includes at least five bedrock mortars, one hearth feature, several red pictographs associated with Cueva de las Brujas and two of the rockshelters, at least three areas of talus/ midden deposits, remnants of a fence corral adjacent to Cueva de las Brujas, and approximately 100 chiqueras downslope from the cave and rockshelters. Most of the chiqueras still retain fainted red painted numbers, said by former ranch hands in the area to have been used to match the baby goats with their mothers when the mothers were brought back from grazing at the end of the day. Archeological deposits within Cuevas de las Brujas and adjacent middens are estimated to be more than 20 centimeters in depth.

Artifact Analysis: The density of the artifact scatter at 41PS970 is variable, ranging from diffuse to dense. Prehistoric artifacts at 41PS970 include two untyped Archaic dart points, one untyped Late Prehistoric arrow point, chipped stone debitage and debris, one unifacial scraper, at least three manos or mano fragments, and firecracked rocks. The chipped stone items were manufactured from a variety of local cherts, chalcedony, and agate. One small flake was produced from non-local obsidian. The projectile points and the obsidian flake were collected from the site during the present project. The historic artifacts observed at Cueva de las Brujas include various tin cans, clear bottle glass (including a Heinz bottle fragment), an undecorated white porcelain cup base fragment, a Fire King Duraglass coffee mug, a 1980 penny, a clear glass bottle neck with twist off closure, and other items. These items suggest that this site was still being used by goat herders, or perhaps visited by others that were aware of the site, into the late twentieth century.

Significance: Although portions of 41PS970 have been severely impacted, there are areas of the site, including Cueva de las Brujas, other rockshelters, and associated talus/midden deposits that contain intact archeological deposits. The overall research potential of this site is considered to be at least moderately high. The research potential of the site is further heightened by the presence of pictographs, as well as chiqueras, a historic feature type which is no longer used in the area. As a result, 41PS970 was designated an official State Archeological Landmark on October 26, 2006.

Recommendations: Although 41PS941 is protected as an official State Archeological Landmark, the Terneros Loop Trail will potentially bring a greater number of people into the area, and could result in a greater risk of vandalism or accidental impact to the site. As a result, it has been recommended that the Terneros Loop Trail be rerouted around 41PS970, from the former ranch road that cuts through the site to the floor of Leyva Canyon. In addition, the site should be monitored at least biannually to assess its condition.

***41PS971 (Pissant)***

Site Type: Site 41PS971 is a rockshelter habitation of unknown prehistoric age.

Site Area: The site measures 3.5 meters north-south by 2 meters east-west, encompassing a total area of .002 acre.

Landform: The rockshelter faces south on a fairly steep upland backslope, overlooking an unnamed intermittent drainage.

Soil Type: Site 41PS971 is located within soils identified by the USDA Natural Resources Conservation Service as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS971 is about 3,740 feet AMSL.

Vegetation: The site is covered primarily by leatherstem, lechuguilla, creosote, catclaw acacia, various opuntias, and fluff grass. Surface visibility is approximately 90 percent.

Disturbance: The floor of the shelter at 41PS971 has been impacted by animal burrowing and trampling, and spalling is evident on the walls of the shelter. The talus outside the shelter has been impacted by erosion. The site is estimated to be about 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS971 was recorded in 2005. The site assessment consisted primarily of surface inspections, although a small trowel test was excavated inside the rockshelter. The rockshelter measures about 1.5 meters long by 1 meter wide. A small area of talus, approximately 2 meters in diameter, is associated with the rockshelter. A scatter of chipped stone debitage (<20 flakes) and burned rocks were located in and around the talus. No diagnostic artifacts or other cultural features were observed.

Artifact Analysis: Artifacts observed at this site were limited to chipped stone debitage and burned rocks. All artifacts appeared to be produced from locally available lithic materials.

Significance: This site has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS971.

**Terneros Creek Trail**

The Terneros Creek Trail follows approximately 7.55 miles of an existing unimproved two-track road and creek bed. The width of the existing road is approximately eight feet in width, while the width of the creek bed is variable. The Terneros Creek Trail extends westward from the confluence of Terneros Creek and Leyva Canyon to Botella Camp (Figure 14). One primitive campsite location was identified and surveyed along the Terneros Creek Trail.

The TPWD Archeology Survey Team conducted the archeological survey of the Terneros Creek Trail corridor March 9–12 and 14–17, 2005. Including buffers and areas of interest within view of the trail, the survey of this corridor encompassed approximately 658 acres. One previously recorded site (41PS491) was re-recorded, and a total of 32 newly identified sites (41PS973-41PS1004) were recorded during the survey of the Terneros Creek Trail corridor. Site descriptions are below and summarized in Appendix A. Eight isolated finds were recorded and are listed in Appendix C.

***41PS491***

Site Type: Site 41PS491 is an open campsite with 12 rockshelters that have evidence of habitation; two shelters include pictographs. The site dates to the Early, Middle, and Late Archaic; Late Prehistoric; and Protohistoric/Historic periods.

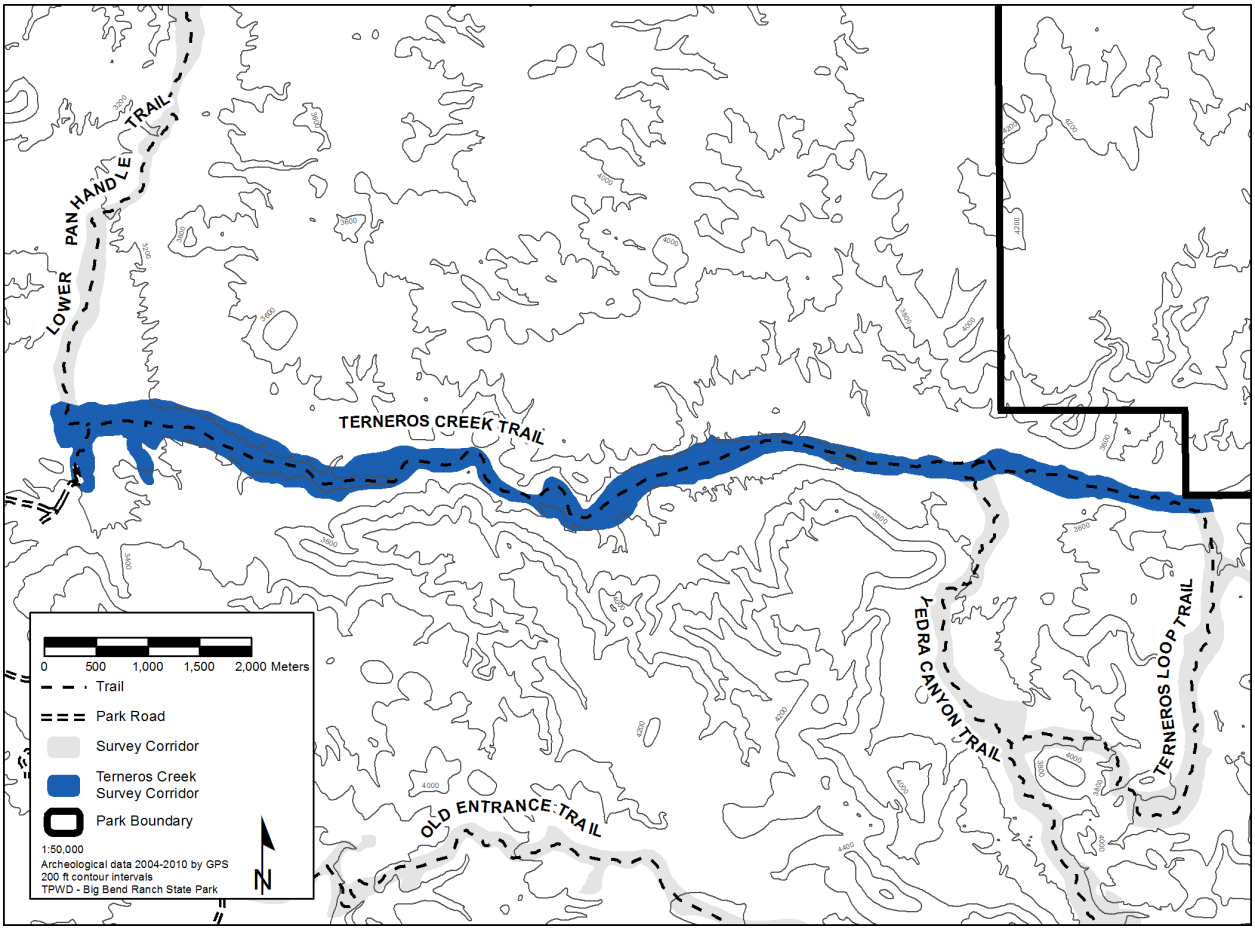


**Figure 14.** Map showing location of Terneros Creek Trail.

Site Area: The site measures 200 meters north-south by 300 meters east-west, encompassing a total area of 14.82 acres.

Landform: The site is situated on a high alluvial terrace and south-facing valley wall that overlooks Terneros Creek.

Soil Type: The USDA Natural Resources Conservation Service has mapped the soils within the 41PS491 site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS491 ranges from about 3,120 to 3,220 feet AMSL.

Vegetation: The site is covered primarily by mesquite, leatherstem, creosote, catclaw acacia, and prickly pear. Surface visibility is variable, ranging from as low as 75 percent in some places outside of the rockshelters to 100 percent inside the rockshelters.

Disturbance: Site 41PS491 has been impacted by sheetwash erosion and active cutting of the terrace by Terneros Creek, animal burrowing/trampling, surface collecting, and natural deterioration of the pictographs on the site. The site appears to be approximately 80 percent intact.

Previous Investigations: Site 41PS491 was originally recorded by J. David Ing and others in 1989 (Ing et al. 1996:213).

Present Investigation: Site 41PS491 was re-recorded in 2005. The site investigation consisted primarily of surface inspections, although trowel probes were excavated within the rockshelters. A total of 12 rockshelters have evidence of habitation, two of which contain faded red pictographs. One rockshelter has the remnants of a historic rock wall extending across part of its entrance. Extensive talus deposits were recorded below several of the rockshelters. The talus consists primarily of natural rock, with some burned rock and dark gray matrix. Three ring middens, one rock pavement, one rock cluster, and several bedrock mortars and metates were also documented during the present investigation. Artifact deposits are generally sparse within the rockshelters, but are somewhat more abundant in the open area of the site. Based on the height of one of the burned rock middens, the maximum depth of cultural deposits at 41PS491 is 50 centimeters; however, trowel tests within the rockshelters indicate that the depth of deposits in these features is considerably less, generally not more than 25 centimeters.

Artifact Analysis: Prehistoric artifacts recorded at 41PS491 include four projectile points, chipped stone debitage and debris, cores, bifaces, burned rocks, manos, metates, one Chinati Plain pottery sherd, and one Conchos Plain sherd. The projectile points were identified as one Early Archaic Pandale dart point, one Middle Archaic Jora dart point, one Late Archaic Paisano dart point, and one Late Archaic expanding stem dart point fragment (untyped). The projectile points, as well as the two pottery sherds, were recovered from the site. Historic artifacts noted on the site include baking powder cans and spent cartridges.

Significance: Site 41PS491 has high research potential, and was designated as an official State Archeological Landmark on May 30, 1997.

Recommendations: Although this site extends to the north bank of Terneros Creek (i.e., the Terneros Trail corridor in this area), the most visible features of 41PS491, the rockshelters, are approximately 60 meters or more north of the creek. Nonetheless, several of these rockshelters are clearly visible from the trail corridor and may elicit the attention of some trail users. As a result, the condition of this site should be monitored at least biannually to determine whether or not the site is being damaged.

***41PS973 (Windbreak)***

Site Type: Site 41PS973 is a lithic scatter of unknown prehistoric age, and a historic rock alignment with associated artifacts.

Site Area: The site measures 65 meters southwest–northeast by 40 meters northwest-southeast, encompassing a total area of 0.64 acre.

Landform: This site is situated on an eroded alluvial terrace remnant on the north side of Terneros Creek.

Soil Type: Soils in the 41PS973 site area have been mapped by the USDA Natural Resources Conservation Service as Studybutte-Rock outcrop complex, 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,200 to 3,220 feet AMSL.

Vegetation: The site is covered primarily by creosote, various opuntias, and fluff grass, providing approximately 85 to 100 percent surface visibility.

Disturbance: Impact at 41PS973 appears to be limited to that caused by erosion. The site is estimated to be about 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS973 was recorded in 2005. The site assessment consisted of surface inspections and the placement of a soil probe excavation. A one-meter long rock alignment was the only cultural feature recorded on the site. A clear glass bottle was found in direct association with the alignment. It is suggested that this feature may have functioned as an expedient windbreak by historic herders.

While a few additional historic artifacts were observed on this site, most of the artifact scatter consists of prehistoric lithic artifacts. A soil probe excavation revealed a maximum depth of 10 centimeters for archeological deposits at this site.

Artifact Analysis: In addition to the aforementioned clear glass bottle, other historic items observed at 41PS973 include a tin can that had been modified with an added wire handle, another unmodified tin can, and a baking powder can lid. Prehistoric artifacts include chipped stone debitage and debris, bifaces, and scrapers. No diagnostic prehistoric artifacts were observed at this site. All of the lithic items appear to be produced from locally available materials.

Significance: Site 41PS973 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS973.

***41PS974 (Bluff Edge)***

Site Type: Site 41PS974 is a boulder shelter of unknown prehistoric age and a probable historic rock wall.

Site Area: The site area, including the shelter, adjacent rock wall, and associated artifact scatter, measures 12 meters north-south by 40 meters east-west. The site encompasses a total area of .118 acre.

Landform: The shelter at 41PS974 is located on a bluff overlooking the south side of Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS974 is about 3,200 feet AMSL.

Vegetation: The area outside the shelter is covered primarily by leatherstem, lechuguilla, creosote, catclaw acacia, various opuntias, and fluff grass. Surface visibility is approximately 90 percent.

Disturbance: Damage to this site appears to be limited to erosion. The site is estimated to be about 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS974 was recorded during the 2005 investigation. The site assessment consisted primarily of surface inspections, although a soil probe was excavated inside the boulder shelter. The dimensions of the shelter are 3 meters wide by 2.5 meters deep by 1 meter high. Much of the shelter floor is bedrock, with pockets of soil extending to a depth of about five centimeters. A rock wall was recorded stacked against another boulder approximately two meters south of the boulder shelter. A tin can and a grinding slab with a deep, molcajete-like basin were found in proximity to the rock wall. A small but somewhat dense scatter of chipped stone artifacts was also observed on the site, outside the shelter. No diagnostic artifacts or other cultural features were observed.

Artifact Analysis: Prehistoric artifacts noted at 41PS974 include chipped stone debitage and debris, bifaces, and the aforementioned grinding slab with a deep, molcajete- like basin. This metate measures 20 centimeters in diameter, and 3 centimeters deep. All of these items were produced from locally available lithic materials. Historic artifacts noted at this site include a tin can lid and a .44-caliber spent cartridge casing.

Significance: This site has moderately low research potential. Few prehistoric artifacts, none of which were temporally diagnostic, were observed on the surface of this site. Furthermore, there is almost no potential for significant buried archeological deposits to exist on this site. The historic feature at 41PS974 lacks any apparent unique attributes that would increase the research potential of this site. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No additional work is recommended at 41PS974.

***41PS975 (Anita's)***

Site Type: Site 41PS975 is a Middle Archaic open campsite.

Site Area: The site measures 50 meters north-south by 80 meters east-west, encompassing a total area of 0.97 acre.

Landform: Site 41PS975 is situated on a low alluvial terrace along the north bank of Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Studybutte-Rock outcrop complex, 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS975 ranges from about 3,200 to 3,220 feet AMSL.

Vegetation: The site is covered primarily by creosote, various opuntias, and fluff grass, providing approximately 85 to 100 percent surface visibility.

Disturbance: An abandoned road cut was observed at the east end of 41PS975, and a bulldozer push pile was evident at the west end of the site along an abandoned road. The Terneros Trail route follows yet another retired ranch road that cuts through the center of this site. Site 41PS975 has been further impacted by erosion and occasional flooding. Nonetheless, the site is estimated to be approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS975 was recorded in 2005. Cultural features recorded on the site consist of three hearths and a burned rock scatter. The hearths are concentrated in the northwest portion of the site, while the burned rock scatter is located near the top of the cutbank in the southeast area of the site. A moderately heavy lithic scatter was found in the immediate area surrounding the hearths. A lithic concentration is also evident in and around the burned rock scatter. The maximum depth of cultural deposits on this site is estimated to be less than 10 centimeters.

Artifact Analysis: Artifacts observed at 41PS975 include chipped stone debitage and debris, cores, various bifaces and chipped stone tools, metates, and burned rocks. One Middle Archaic Langtry dart point and an unidentifiable dart point fragment were recovered. All phases of lithic reduction were represented in the lithic assemblage. These items were produced from a variety of local materials.

Significance: Site 41PS975 has suffered considerable impact as a result of road development, erosion, and occasional flooding, and has limited potential to contain intact buried

archeological deposits. The site has moderate research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The features at 41PS975 should be monitored annually, but no other work is recommended at 41PS975 at this time.

***41PS976 (Right Hand Man)***

Site Type: Site 41PS976 is a rockshelter and pictograph panel possibly dating to the Late Archaic.

Site Area: The site area measures 5 meters north-south by 20 meters east-west, encompassing a total area of 0.02 acre.

Landform: The pictograph panel at 41PS976 is located on a rock face that overlooks the north side of Terneros Creek. The rockshelter is situated about three meters east of the pictograph panel.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS976 is about 3,240 feet AMSL.

Vegetation: The site area is devoid of vegetation, resulting in 100 percent surface visibility.

Disturbance: Damage to this site includes occasional flooding of the rockshelter, animal burrowing/trampling, spalling of the shelter walls and ceiling, and the mineralization of portions of the pictograph panel. The site is estimated to be about 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS976 was recorded in 2005. The dimensions of the rockshelter are 17 meters wide by 2.7 meters deep by 1.4 meters high. The depth of the soil matrix within the shelter is estimated to be 10 or more centimeters. A chipped stone flake and core were observed along the drip line near the west end of the shelter. Other artifacts observed in the shelter include burned rocks, two tin cans and a sardine can lid. No other artifacts were evident at 41PS976.

A pictograph panel of four red figures is located about three meters west of the rockshelter. The figures include one large anthropomorphic image, partly obliterated by mineralization, flanked on the left by three much smaller images. These images are also painted in red, but are noticeably lighter in color than the larger anthropomorph, perhaps suggesting that the panel was painted on at least two different occasions. The smaller figures include another anthropomorph, an image shaped like a Late Archaic Shumla dart point, and an 'X'. The Shumla-like figure may suggest a Late Archaic date for these pictographs.

Artifact Analysis: One chipped stone flake and one core were observed in the west end of the rockshelter at 41PS976. Other prehistoric material in the shelter included burned rocks. Historic artifacts included two tin cans and a sardine can lid.

Significance: The research potential of this site is moderately high. The site warrants designation as an official State Antiquities Landmark under Criteria 1, 2, 3, and possibly 5.

Recommendations: The rockshelter and pictograph panel at 41PS976 will be within view of trail users along this section of the Terneros Trail. As a result, the site should be monitored at least biannually to assess its condition. In addition, this site should be nominated as an official State Antiquities Landmark.

***41PS977 (Road Ends)***

Site Type: Site 41PS977 is an open campsite of unknown prehistoric age.

Site Area: The site measures 160 meters northeast-southwest by 70 meters northwest-southeast, encompassing a total area of 2.77 acres.

Landform: The site is situated on a high alluvial terrace and upland footslope.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Studybutte-Rock outcrop complex, 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of site 41PS977 is about 3,120 feet AMSL.

Vegetation: The site is covered primarily by creosote, various opuntias, and fluff grass, providing approximately 85 to 100 percent surface visibility.

Disturbance: Damage to this site includes severe erosion and the establishment of an undeveloped two-track road through the site. The site is estimated to be about 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS977 was recorded in 2005. Recorded features consist of four bedrock mortars and one bedrock metate. The artifact scatter at 41PS977 is diffuse, and no temporally diagnostic artifacts were noted. Based on the exposed bedrock and thin gravels at this site, the estimated depth of deposits at 41PS977 is estimated to be less than five centimeters.

Artifact Analysis: The artifact scatter at 41PS977 includes chipped stone debitage and debris, one biface, and two slab metates. All items were produced from locally available lithic materials.

Significance: Though metates and bedrock mortars are present at site 41PS977, the artifact scatter at this site is diffuse. In addition, the site is severely deflated. As a result, the site has low research potential and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS977.

***41PS978 (Point in the Road)***

Site Type: Site 41PS978 is a Late Prehistoric open campsite.

Site Area: The site measures 75 meters northwest-southeast by 50 meters northeast-southwest, encompassing a total area of 0.93 acre.

Landform: The site is situated on an alluvial terrace remnant.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS978 ranges from about 3,240 to 3,260 feet AMSL.

Vegetation: The site is covered primarily by creosote, various opuntias, and fluff grass, providing approximately 85 to 100 percent surface visibility.

Disturbance: Damage to this site includes the establishment of a former ranch road through the site, fence construction, occasional flooding, erosion, animal burrowing/ trampling, and artifact collecting. The site is estimated to be about 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS978 was recorded in 2005. An arrow point, a burned rock midden, and gray midden–stained soils were recorded in the central part of the site. With the exception of fence posts, no other cultural features were observed at this site. Based on observations of a roadcut within the site area, the depth of deposits at 41PS978 is approximately 40 centimeters.

Artifact Analysis: A Late Prehistoric untyped arrow point was collected. Other artifacts observed at this site include chipped stone debitage and debris, cores, bifaces, scrapers, manos, and burned rocks. The burned rocks are concentrated in the central part of the site. All artifacts were produced from locally available lithic materials.

Significance: Unlike many open campsites in the area, the cultural deposits at site 41PS978 have considerable depth and there is a high potential for recovering adequate material to radiocarbon date. Among the varied lithic artifacts on the surface of 41PS978 was a single Late Prehistoric untyped arrow point. This may indicate that 41PS978 is a single component site that has not been mixed by multiple occupations. As a result, this site is considered to have high research potential and meets Criterion 1 for designation as an official State Antiquities Landmark (potential to contribute to a better understanding of prehistory).

Recommendations: Avoidance of this site is recommended by routing the Terneros Trail along the Terneros Creek drainage in this area rather than along the ranch road that cuts through 41PS978. In addition, this site should be monitored biannually to assess its condition. This site should be nominated for designation as an official State Antiquities Landmark.

***41PS979 (Benches)***

Site Type: Site 41PS979 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 110 meters north-south by 80 meters east-west, encompassing a total area of 2.2 acres.

Landform: The site is situated on a low bench and intermediate terrace about 200 meters east of Manzanillo Creek.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS979 site area as Corazones-Ojinaga complex, 10 to 40 percent slopes (USDA 2013).

Elevation: The elevation of 41PS979 is about 3,200 feet AMSL.

Vegetation: The site is covered primarily by creosote, various opuntias, and fluff grass, providing approximately 85 to 100 percent surface visibility.

Disturbance: This site has been impacted by erosion and animal burrowing/trampling, and is estimated to be only about 30 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS979 was recorded in 2005. The lithic scatter is very sparse at this site, consisting of approximately 12 artifacts. No cultural features were observed. Based on bedrock exposures and gravels at 41PS979, it is estimated that the site is less than 10 centimeters in depth and may be limited to the ground surface.

Artifact Analysis: Approximately 12 artifacts were noted at 41PS979, including one chipped stone core, an expedient knife, and about 10 flakes. All artifacts were produced from locally available lithic materials.

Significance: The artifact scatter at 41PS979 is diffuse, and the site is severely deflated. As a result, 41PS979 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS980 (Confluence)***

Site Type: Site 41PS980 is a rockshelter and associated talus with Middle Archaic, Late Prehistoric, and Protohistoric/Historic components.

Site Area: The site measures 11 meters north-south by 10 meters east-west, encompassing a total area of 0.03 acre.

Landform: The rockshelter at 41PS980 is located within an outcrop of Alazan Lava.

Soil Type: Soils in the 41PS980 site area have been mapped by the USDA Natural Resources Conservation Service as Studybutte-Rock outcrop complex, 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS980 is about 3,220 feet AMSL.

Vegetation: The site is covered primarily by leatherstem, lechuguilla, creosote, sotol, Torrey yucca, various opuntias, and fluff grass. Surface visibility is variable, ranging from as low as 85 percent outside the rockshelter to 100 percent inside the shelter.

Disturbance: The floor of the shelter has been impacted by animal burrowing and trampling, and the talus outside the shelter has been impacted by erosion. An estimated 80 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS980 was recorded in 2005. The site assessment consisted primarily of surface inspections; although a small trowel test was excavated inside the rockshelter. The rockshelter measures about 4.5 meters wide at the entrance, 2.3 meters deep and 1.8 meters high. The shelter has sediment to more than 15 centimeters in depth. A partial rock wall is evident along the east side of the shelter entrance.

Artifact Analysis: Temporally diagnostic artifacts recovered from this site consist of a Middle Archaic contracting stem dart point fragment (untyped), and two Conchos Plain sherds. Other artifacts observed at 41PS980 include chipped stone cores, debitage, bifaces, manos and metates. All lithic items appear to have been manufactured from locally available materials. No historic artifacts were observed at this site.

Significance: Based on the potential for buried archeological deposits in the rockshelter and talus at 41PS980, the good condition of the site, and the presence of prehistoric pottery, this site is considered to have high research potential. The site meets State Antiquities Landmark Criteria 1 and 3.

Recommendations: The condition of 41PS980 should be monitored at least biannually, and the site is recommended for nomination as an official State Antiquities Landmark.

***41PS981 (Stony Ledge)***

Site Type: Site 41PS981 is a rockshelter of unknown prehistoric age.

Site Area: The site measures 9 meters north-south by 10 meters east-west, encompassing a total area of 0.02 acre.

Landform: The rockshelter is located within an outcrop of Alazan Lava.

Soil Type: Soils in the 41PS981 site area have been mapped by the USDA Natural Resources Conservation Service as Studybutte-Rock outcrop complex, 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS981 is about 3,180 feet AMSL.

Vegetation: The site is covered with leatherstem, lechuguilla, creosote, sotol, Torrey yucca, various opuntias, and fluff grass. Surface visibility is variable, ranging from as low as 85 percent outside the rockshelter to 100 percent inside the shelter.

Disturbance: The site has been impacted by erosion and the floor of the shelter has been impacted by animal burrowing and trampling. The site is estimated to be approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS981 was recorded in 2005. The site assessment consisted primarily of surface inspections; although a small trowel test was excavated inside the rockshelter. No talus was observed in association with the shelter, but a lithic scatter was documented outside the entrance. The rockshelter measures approximately 2 meters wide at the entrance, 2 meters deep, and a maximum of 1.9 meters high. The shelter has sediment to more than 10 centimeters in depth. The rockshelter entrance is partially enclosed by the remnants of a rock wall, likely preshistoric.

Artifact Analysis: No temporally diagnostic artifacts were recovered from 41PS981. Artifacts observed on the site are limited to chipped stone debitage and manos.

Significance: Based on the potential for buried archeological deposits in the rockshelter at 41PS981, and the generally good condition of the site, this site is considered to have moderate research potential. The site meets State Antiquities Landmark Criterion 2 (the site's archeological deposits are preserved and intact) and merits designation.

Recommendations: The condition of 41PS981 should be monitored biannually. In addition, the site should be nominated as an official State Antiquities Landmark.

***41PS982 (Polished Stone)***

Site Type: Site 41PS982 is a Late Archaic lithic scatter.

Site Area: The site measures 60 meters north-south by 90 meters east-west, encompassing a total area of 1.3 acres.

Landform: Site 41PS982 is situated on an alluvial terrace overlooking the north bank of Terneros Creek.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS982 site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,160 to 3,180 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and sotol. The overall surface visibility is 90 to 100 percent.

Disturbance: This site has been severely impacted by erosion. An estimated 60 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS982 was recorded in 2005. No cultural features were identified on the site. The maximum depth of cultural deposits on this site is estimated to be less than 10 centimeters.

Artifact Analysis: Artifacts recovered from 41PS982 consist of a Late Archaic Van Horn dart point and a polished stone of undetermined function. Other items identified at this site include chipped stone cores, debitage, scrapers, manos and metates, as well as historic tin cans. All lithic items were produced from locally available materials.

Significance: Site 41PS982 is a light lithic scatter with no prehistoric cultural features, and minimal potential to contain buried cultural deposits. The site has low research potential and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS983 (Endless)***

Site Type: Site 41PS983 is a Middle and Late Archaic open campsite.

Site Area: The site measures 630 meters north-south by 180 meters east-west, encompassing a total area of 28 acres.

Landform: Site 41PS983 is situated on an elevated terrace or hill remnant adjoining the west side of the Manzanillo Canyon drainage, south of Terneros Creek.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,120 to 3,240 feet AMSL.

Vegetation: The site is covered primarily by mesquite, leatherstem, creosote, catclaw acacia, and prickly pear. Surface visibility is variable, ranging from 75 to 100 percent.

Disturbance: The site has been impacted by colluvial/sheet erosion, deterioration of the hearth features, fence construction, and animal burrowing/trampling in the area. An estimated 40 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS983 was recorded in 2005. Cultural features recorded at the site include two hearths and two burned rock scatters that may represent displaced hearths. In addition, a historic fence was evident on the site. The hearth features are scattered across the site. Five dart points were among the artifacts recorded. All points were recovered near the northern end of the site, overlooking the south side of Terneros Creek. Based on animal burrow observations, the thickness of the cultural deposit at 41PS983 is estimated to be approximately 20 centimeters.

Artifact Analysis: Prehistoric artifacts noted at 41PS983 consist of chipped stone cores, debitage and debris, bifaces, and scrapers, as well as the aforementioned dart points. The dart points, all of which were recovered for curation, were identified as one Middle Archaic Almagre, one Middle Archaic Jora fragment, one Middle Archaic contracting stem fragment (untyped), one Late Archaic Palmillas (Form 2), and one Late Archaic Palmillas fragment (Form 2). All of these items were manufactured from locally available lithic materials.

Significance: Although this multi-component Middle Archaic/Late Archaic site includes numerous artifacts as well as hearth features, the site is considered to have low research potential due to the poor condition of the site and its limited potential to contain intact buried cultural deposits. Site 41PS983 does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: This site is not readily visible from the Terneros Trail route, which follows the Terneros Creek drainage bottom through this area, and is unlikely to elicit the attention of trail users. No further work is recommended at 41PS983.

***41PS984 (Itty Bitty)***

Site Type: Site 41PS984 is a rockshelter with historic and unknown prehistoric components.

Site Area: The site measures 20 meters north-south by 15 meters east-west, encompassing a total area of .07 acre.

Landform: The rockshelter faces south on a steep upland backslope, overlooking Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 70 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes and 30 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of 41PS984 is about 3,400 feet AMSL.

Vegetation: The area outside the rockshelter is covered primarily with creosote, leatherstem, catclaw acacia, various opuntias, and fluff grass. Surface visibility outside the shelter is approximately 90 percent; the interior of the shelter has 100 percent surface visibility.

Disturbance: The floor of the rockshelter has been impacted by animal trampling, and the talus outside the shelter has been impacted by erosion. The site is estimated to be about 80 percent intact.

Previous Investigations: The rockshelter was noted and photographed during a general reconnaissance of the area by TPWD staff in 2001, but the site was not formally recorded until the present investigation. No changes in the condition of this site were evident between the 2001 and 2005 visits.

Present Investigation: Site 41PS984 was recorded in 2005. The rockshelter measures about 2.3 meters wide by 1.7 meters high by 4.3 meters deep. A cist was recorded at the rear of the shelter, and a small chamber was found on the east side of the shelter. The roof of the shelter is sooted. A thin scatter of talus, measuring approximately 10 meters in diameter, extends down the rocky slope from the shelter entrance. A rock wall, approximately 7 meters in length, was observed immediately outside the shelter and runs perpendicular to the mouth of the rockshelter. Based on the presence of sardine and tobacco cans on the site, the wall is probably a historic feature that is related to late nineteenth or early twentieth century sheep herding in the area. The prehistoric occupation of the site is indicated by a sparse scatter of chipped stone cores and debitage. No diagnostic artifacts were observed. Based on the uneven nature of the soil matrix on the floor of the shelter at 41PS984, it is estimated that the archeological deposits within the shelter may extend more than 15 centimeters in depth.

Artifact Analysis: Artifacts noted at this site are limited to historic cans, and chipped stone cores and debitage. All of the chipped stone artifacts appear to be produced from locally available lithic materials.

Significance: Based on the intact nature of the deposits at 41PS984, this site is considered to have moderately high research potential and meets State Antiquities Landmark Criterion 2 (the site's archeological deposits are preserved and intact).

Recommendations: Site 41PS984 is recommended for nomination as an official State

Antiquities Landmark. The site should be monitored at least biannually to assess its condition.

***41PS985 (Bullseye)***

Site Type: Site 41PS985 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 20 meters north-south by 20 meters east-west, encompassing a total area of 0.1 acre.

Landform: Site 41PS985 is situated on a knoll near the mouth of an arroyo that flows into Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Studybutte-Rock outcrop complex, 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS985 is approximately 3,360 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and sotol. The overall surface visibility ranges from 75 to 100 percent.

Disturbance: This site is severely deflated. Only about 40 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS985 was recorded in 2005. The site assessment consisted primarily of surface inspections, although a minimal trowel excavation was conducted to determine the depth of deposits. The site is comprised of a diffuse lithic scatter. No cultural features were evident. The maximum depth of cultural deposits is five centimeters.

Artifact Analysis: Cultural material observed at 41PS985 is limited to chipped stone debitage and a few bifaces. No temporally diagnostic artifacts were recovered from the site. All items were produced from locally available lithic materials.

Significance: Site 41PS985 is a light lithic scatter with no prehistoric cultural features, and minimal potential to contain buried cultural deposits. The site has low research potential and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS985.

***41PS986 (Jeff's)***

Site Type: Site 41PS986 is a multi-component Late Archaic and Late Prehistoric open campsite.

Site Area: The site measures 70 meters north-south by 60 meters east-west, encompassing a total area of 1.04 acres.

Landform: Site 41PS986 is located on a hill summit overlooking the north side of Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of the site is about 3,360 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, and catclaw acacia. Surface visibility is variable, ranging from 75 to 100 percent.

Disturbance: The site has been impacted by erosion and animal burrowing/trampling in the area. An estimated 70 percent of the site remains intact.

Previous Investigations: In 2003, during a cultural and natural resources program meeting at BBRSP, Jeff Sparks, then a Texas Parks and Wildlife Department Natural Resources Coordinator in Tyler, identified a Late Archaic expanding stem dart point of unknown type at this location. The artifact was not removed from the site at that time, but was placed out of view under a creosote bush. The dart point was not relocated during the 2005 investigation.

Present Investigation: Site 41PS986 was not formally recorded until 2005. A single feature was identified at 41PS986: a circular stacked rock feature that is likely attributable to the Late Prehistoric Cielo complex. This feature, which measures approximately 3.7 meters in diameter with a possible northwest-facing entranceway, is situated near the southern terminus of the site. A diffuse burned rock scatter was recorded across much of the remainder of the site. Although the aforementioned Late Archaic dart point that was identified at this location in 2003 was not relocated during the 2005 investigation, an untyped Late Prehistoric arrow point fragment was recovered near the apparent Cielo feature. Based on animal burrow observations, the thickness of the cultural deposit at 41PS986 is estimated to be approximately 20 centimeters.

Artifact Analysis: In addition to the Late Archaic dart point observed at 41PS986 in 2003, and the untyped Late Prehistoric arrow point fragment recovered from the site in 2005, chipped stone cores, debitage and debris, bifaces, manos, metates, and burned rocks were also evident on the site. All of these items appear to have been manufactured from locally available lithic materials. In addition to the prehistoric artifacts, one modern juice can was also noted.

Significance: Based on the relatively good condition of this site, including the apparent Cielo feature, and the identification of associated temporally diagnostic artifacts, 41PS986 is considered to have moderately high research potential. This site meets Criterion 1 for designation as an official State Antiquities Landmark (potential to contribute to a better understanding of prehistory).

Recommendations: Although this site is not readily visible from the Terneros Trail route, which follows the Terneros Creek drainage bottom through this area, and is unlikely to elicit the attention of trail users, the site should be monitored on an annual basis. It is recommended that site 41PS986 be nominated for designation as an official State Antiquities Landmark.

***41PS987 (Neighbor)***

Site Type: Site 41PS987 is an open campsite of unknown prehistoric age.

Site Area: The site measures 30 meters north-south by 40 meters east-west, encompassing a total area of 0.29 acre.

Landform: Site 41PS987 is located on a high terrace overlooking the north side of Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of the site is about 3,340 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, and catclaw acacia. Surface visibility is variable, ranging from 75 to 100 percent.

Disturbance: The site has been impacted by erosion, but an estimated 70 percent of the site remains intact.

Previous Investigations: None

Present Investigation: Site 41PS987 was recorded during the 2005 investigation. A burned rock midden was recorded in the northeast part of the site; it is generally longitudinal, with perhaps a slight arc. Although there are scattered burned rocks west of this feature, it does not appear to be a ring midden. The burned rock midden measures approximately 6.85 meters north-south by 3.75 meters east-west. Chipped stone debitage was found in association with the burned rock midden, as well as across the site in general. Based on the relief of the burned rock midden, the thickness of the cultural deposit at 41PS987 is estimated to be approximately 15 centimeters.

Artifact Analysis: In addition to the aforementioned burned rocks and chipped stone debitage, cores and bifaces were also observed at 41PS987. All items appear to have been manufactured from locally available lithic materials.

Significance: Based on the relatively good condition of 41PS987, and the presence of a burned rock midden on the site, 41PS987 is considered to have moderate research potential. The site merits designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute to a better understanding of prehistory).

Recommendations: This site is not readily visible from the Terneros Trail route, which follows the Terneros Creek drainage bottom through this area, and is unlikely to elicit the attention of trail users. Nonetheless, the site should be monitored on an annual basis and nominated as an official State Antiquities Landmark.

***41PS988 (El Rancho Chiquito)***

Site Type: Site 41PS988 is an open campsite of unknown prehistoric age, and a late nineteenth to early twentieth century ranchstead.

Site Area: The prehistoric component of 41PS988 measures 65 meters north-south by 350 meters east-west, encompassing a total area of 5.6 acres. The historic component extends 55 meters north-south by 150 meters east-west. The historic component encompasses an area of two acres.

Landform: Site 41PS988 is located on a high terrace overlooking Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,360 to 3,380 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and mesquite. The surface visibility is 90 to 100 percent.

Disturbance: Site 41PS988 has been impacted by sheet erosion, establishment of a former ranch road through the site, and deterioration of the historic structural remnants. The prehistoric component has been further impacted by the subsequent historic occupation of the site. Approximately 60 percent of the total site remains intact.

Previous Investigations: This site was noted and photographed during a general reconnaissance of the area by TPWD staff in 2001, but the site was not formally recorded until the 2005 investigation. No changes in the condition of this site were evident between the 2001 and 2005 visits.

Present Investigation: Site 41PS988 was recorded in 2005. Features recorded at 41PS988 include the rock ruins of a single-room residence, the remains of another unidentified rock structure, one hearth feature, two burned

rock scatters, four cairns, a boulder mortar, and the remnants of a former wooden corral. In addition to the two structural rock features and the corral remnants, the cairns at 41PS988 could be historic in age due to their proximity to the single-room residential ruin. The other features are assumed to be attributable to the prehistoric occupation of this site. A moderately dense artifact scatter of both prehistoric and historic artifacts is evident at 41PS988. Based on the presence of bedrock exposures and the lack of soil development in the area, it is estimated that the depth of cultural deposits at 41PS988 is less than 20 centimeters.

Artifact Analysis: Artifacts associated with the prehistoric component at 41PS988 include chipped stone debitage, bifaces, scrapers, manos, and burned rocks, all of which appear to have been produced from locally available lithic material. Historic artifacts include undecorated lead-glazed earthenware, whiteware, and porcelain, solarized glass, clear glass, brown glass, a hole-in-top can, Prince Albert tobacco cans, metal buckets, wire, and horseshoes. The nature of the historic artifact assemblage suggests a date range of the 1890s to early twentieth century for occupation of the ranch.

Significance: While the prehistoric component of 41PS988 is considered to have moderately low research potential due to its poor condition, the historic component remains intact enough to have moderate research potential. Nonetheless, the site does not merit designation as an official State Antiquities Landmark.

Recommendations: The Terneros Trail route follows an existing ranch road through 41PS988, and features and artifacts on this site are visible to trail users. As a result, additional historical background information should be gathered for this site and provided as interpretive information in trail brochures or on-site signage, along with a strong stewardship message. The site should be monitored on an annual basis.

***41PS989 (Jose)***

Site Type: Site 41PS989 is an open campsite of unknown prehistoric age.

Site Area: The site measures 80 meters northeast-southwest by 30 meters east-west, encompassing a total area of 0.59 acre.

Landform: Site 41PS989 is located on an upland footslope that overlooks the north side of Terneros Creek.

Soil Type: The site is located within an area identified by the Natural Resources Conservation Service as the Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,360 to 3,380 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, and catclaw acacia. Surface visibility ranges from about 80 to 100 percent.

Disturbance: The site has been severely impacted by erosion; only an estimated 40 percent of the site remains intact.

Previous Investigations: None

Present Investigation: Site 41PS989 was recorded in 2005. A burned rock scatter, located in the south central part of the site, measures 3 meters north-south by 6 meters east-west. Based on the nature of the landform upon which 41PS989 is situated, the thickness of the cultural deposit at this site is estimated to be less than 10 centimeters.

Artifact Analysis: A moderately dense artifact scatter is evident at 41PS989, and includes

chipped stone debitage, bifaces, manos, and the previously mentioned burned rocks. All items appeared to have been produced from locally available lithic materials.

Significance: Based on the poor condition of 41PS989 and the absence of temporally diagnostic artifacts, this site is considered to have low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS990 (Placido)***

Site Type: Site 41PS990 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 30 meters north-south by 100 meters east-west, encompassing a total area of 0.74 acre.

Landform: Site 41PS990 is situated on a high terrace overlooking the north side of Terneros Creek.

Soil Type: The site is located within an area identified by the Natural Resources Conservation Service as the Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS990 ranges from approximately 3,340 to 3,360 feet AMSL.

Vegetation: The site is covered primarily by creosote and acacia, providing approximately 95 to 100 percent ground surface visibility.

Disturbance: This site has been severely impacted by erosion, establishment of a former ranch road through the area, and animal burrowing/trampling. The site is estimated to be about 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS990 was recorded in 2005. A lithic scatter was documented but no cultural features were evident. Based on the eroded nature of the landform and the appearance of bedrock outcrops at 41PS990, the archeological deposits at this site are estimated to be no more than 10 centimeters in thickness.

Artifact Analysis: Artifacts observed at 41PS990 are limited to a somewhat sparse scatter of chipped stone debitage, bifaces, and burned rocks, all of which were manufactured from locally available lithic materials.

Significance: Site 41PS990 consists of a relatively sparse scatter of artifacts and no cultural features. Furthermore, the site has been severely disturbed by erosion, construction of a former ranch road, and animal burrowing/trampling. As a result, the research potential is low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS991 (Luciano)***

Site Type: Site 41PS991 is a historic twentieth century corral/pen.

Site Area: The site measures 20 meters southwest-northeast by 20 meters northwest-southeast, encompassing a total area of 0.1 acre.

Landform: Site 41PS991 is located on a high terrace overlooking Terneros Creek.

Soil Type: The site is located within an area identified by the Natural Resources Conservation Service as the Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of site 41PS991 is 3,370 feet AMSL.

Vegetation: The site is covered primarily by creosote, acacia, and mesquite. The surface visibility is 90 to 100 percent.

Disturbance: Site 41PS991 has been impacted by sheet erosion and deterioration of the cultural features. Approximately 80 percent of the total site remains intact.

Previous Investigations: This site was noted during a general reconnaissance of the area by TPWD staff in 2001, but the site was not formally recorded until 2005. No changes in the condition of this site were evident between the 2001 and 2005 visits.

Present Investigation: Site 41PS991 was recorded in 2005 and is comprised of a corral made of wooden posts with 'hog wire' on the lower half and a single strand of barbed wire above. An old two-track road runs adjacent to the south side of the corral. A 1 by 3 meter stack of rocks was observed at the southeast corner of the corral, perhaps constructed to block a hole under the fence. Based on the nature of the historic feature at 41PS991 and the associated artifacts, the archeological deposits at this site are limited to the ground surface.

Artifact Analysis: Artifacts documented at 41PS991 include one clear glass gallon jug (broken), one lard can, and a broken medicine bottle, all of which date to the twentieth century.

Significance: This site has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS992 (Forgotten)***

Site Type: Site 41PS992 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 15 meters north-south by 15 meters east-west, encompassing a total area of 0.06 acre.

Landform: Site 41PS992 is situated on an upland toeslope that overlooks the south bank of Terneros Creek.

Soil Type: The site is located within an area identified by the Natural Resources Conservation Service as the Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS992 is approximately 3,320 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and sotol. Overall surface visibility ranges from 85 to 100 percent.

Disturbance: This site is severely deflated. Only about 30 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS992 was recorded in 2005. A diffuse lithic scatter defined the site boundary. The maximum depth of cultural deposits is estimated to be less than 10 centimeters based on the lack of soil development in the area.

Artifact Analysis: Cultural material observed at 41PS992 is limited to chipped stone debitage, manos, and burned rocks. No temporally diagnostic artifacts were recovered from the site. All items were produced from locally available lithic materials.

Significance: Site 41PS992 is a light lithic scatter with no prehistoric cultural features, and minimal potential to contain buried cultural deposits. The site has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS993 (Lost Montones)***

Site Type: Site 41PS993 is a Late Prehistoric lithic scatter.

Site Area: The site measures 60 meters north-south by 60 meters east-west, encompassing a total area of 0.89 acre.

Landform: Site 41PS993 is situated on a remnant elevated terrace overlooking the south bank of Terneros Creek.

Soil Type: Soils within the site area have been identified by the Natural Resources Conservation Service as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS993 is approximately 3,440 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and sotol. The overall surface visibility ranges from 90 to 100 percent.

Disturbance: This site has been impacted by severe erosion, construction of a former ranch road and associated water bars; only about 30 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS993 was recorded in 2005. Despite impact from erosion, gray midden-stained soils and a dense scatter of chipped stone artifacts and burned rocks were evident across a portion of 41PS993. Based on the depth of gray midden soils observed along gullies on the site, remaining cultural deposits at this site appear to be as much as 20 centimeters in thickness.

Artifact Analysis: Artifacts observed at 41PS993, all of which were produced from locally available lithic materials, include chipped stone cores, debitage, bifaces, scrapers, manos, metates, and burned rocks. One Late Prehistoric Perdiz arrow point and one Late Prehistoric Cliffton/Perdiz preform were recovered from the site.

Significance: Site 41PS993 may have once had relatively high research potential, based on the density of lithics and the presence of gray midden soil, but it has since been severely impacted by erosion, construction of a former ranch road and associated water bars. As a result, the research potential at 41PS993 is considered to be low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this time.

***41PS994 (Final Chase)***

Site Type: Site 41PS994 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 30 meters north-south by 60 meters east-west, encompassing a total area of 0.44 acre.

Landform: Site 41PS994 is located on a series of intermediate terraces on the north side of Terneros Creek that are divided by arroyos.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS994 is approximately 3,400 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, acacia, and sotol. The overall surface visibility ranges from 90 to 100 percent.

Disturbance: This site has been impacted by severe erosion. An estimated 50 percent of 41PS994 remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS994 was recorded in 2005. This dense lithic scatter stretches across a series of intermediate terraces divided by arroyos, but it was considered one site that had been impacted by erosion. A mano and burned rocks were evident among the other chipped stone artifacts on the site. Based on the eroded nature of the landform and the near absence of soils in the area, the cultural deposits at 41PS994 are estimated to be less than 10 centimeters in thickness.

Artifact Analysis: The artifacts observed at 41PS994 appear to all be produced from locally available lithic materials, and include chipped stone debitage, one biface fragment, scrapers, one mano, and burned rocks.

Significance: No cultural features were observed at 41PS994, and the site has been severely impacted by erosion. As a result, the research potential at 41PS994 is considered to be low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this time.

***41PS995 (Off and Running)***

Site Type: Site 41PS995 is an open campsite of unknown prehistoric age.

Site Area: The site measures 130 meters north-south by 290 meters east-west, encompassing a total area of 9.32 acres.

Landform: Site 41PS989 is located on a high terrace overlooking the south side of Terneros Creek, west of the confluence of Leyva Canyon and Terneros Creek.

Soil Type: Soils in the area of 41PS995 have been identified by the Natural Resources Conservation Service as 50 percent Pantak and Lingua soils, 1 to 16 percent slopes and 50 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site ranges from approximately 3,440 to 3,460 feet AMSL.

Vegetation: The site is covered primarily by ocotillo, creosote, and catclaw acacia. Surface visibility ranges from about 80 to 100 percent.

Disturbance: The site has been impacted by erosion, animal burrowing and trampling, and the construction of several former ranch roads across the area. Nonetheless, about 60 percent of this site remains intact.

Previous Investigations: None

Present Investigation: Site 41PS995 was recorded in 2005. The site assessment consisted primarily of surface inspections, although a trowel probe was excavated to determine the depth of deposits at this site. The sole feature identified within what would otherwise be described as a lithic scatter was a boulder mortar. Based on the soil probe excavation, the thickness of the cultural deposit at 41PS995 is approximately eight centimeters.

Artifact Analysis: A moderately dense artifact scatter was recorded at 41PS995, and includes chipped stone debitage, bifaces, scrapers, and manos. All artifacts appear to have been produced from locally available lithic materials.

Significance: Based on the relatively poor condition of 41PS995, and the general lack of cultural features and absence of temporally diagnostic artifacts, this site is considered to have moderately low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS996 (Pole Position)***

Site Type: Site 41PS996 is an open campsite of unknown prehistoric age.

Site Area: The site measures 10 meters north-south by 20 meters east-west, encompassing a total area of 0.05 acre.

Landform: Site 41PS996 is situated on an upland toeslope overlooking the north side of Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site is approximately 3,420 feet AMSL.

Vegetation: The site is covered primarily by creosote and catclaw acacia. Surface visibility is about 90 to 100 percent.

Disturbance: The site has been severely dissected by erosion. Only about 30 percent of this site remains intact.

Previous Investigations: None

Present Investigation: Site 41PS996 was recorded in 2005. Based on the nature of the landform upon which 41PS996 is situated, the thickness of cultural deposits at this site is less than 10 centimeters.

Artifact Analysis: The artifact assemblage at 41PS996 consists of chipped stone debitage and a slab metate, all of which appear to have been produced from locally available lithic materials.

Significance: Based on the poor condition of 41PS996, the general lack of cultural features and absence of temporally diagnostic artifacts, this site is considered to have low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS997 (Former Spring)***

Site Type: Site 41PS997 is an open campsite of unknown prehistoric age.

Site Area: The site measures 60 meters north-south by 60 meters east-west, encompassing a total area of 0.89 acre.

Landform: Site 41PS997 is situated on an upland footslope and toeslope overlooking the north side of Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,420 to 3,440 feet AMSL.

Vegetation: The site is covered primarily by creosote and catclaw acacia. Surface visibility is about 90 to 100 percent.

Disturbance: The site has been impacted by erosion; about 60 percent of this site remains intact.

Previous Investigations: None

Present Investigation: Site 41PS997 was recorded in 2005. A burned rock scatter was recorded, measuring approximately 15 meters in diameter, with minimal relief. Based on the depth of the burned rock scatter, the archeological deposits at this site are estimated to be about 10 centimeters in thickness.

Artifact Analysis: The artifact assemblage noted at 41PS997 is comprised of chipped stone debitage and manos, all of which appeared to have been produced from locally available lithic materials.

Significance: Based on the relatively poor condition of 41PS997, the general lack of cultural features, and absence of temporally diagnostic artifacts, this site is considered to have moderately low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS998 (Turn for Home)***

Site Type: Site 41PS998 is a Late Archaic open campsite.

Site Area: The site measures 40 meters north-south by 50 meters east-west, encompassing a total area of 0.49 acre.

Landform: Site 41PS998 is situated on a high terrace overlooking the south side of Terneros Creek.

Soil Type: Soils in the area of 41PS998 have been mapped by the Natural Resources Conservation Service as Manzanillo-Chilicotal-Holguin association, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,520 feet AMSL.

Vegetation: The site is covered primarily by creosote and catclaw acacia. Surface visibility is about 90 to 100 percent.

Disturbance: The site has been impacted by erosion and animal burrowing/trampling, and remains only about 40 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS998 was recorded in 2005. A hearth was documented measuring approximately 1 meter in diameter and comprised of rounded stones ranging in size from 5 to 10 centimeters. Based on cut-bank examinations, the cultural deposits at 41PS998 are surficial.

Artifact Analysis: The artifact scatter at this site consists of chipped stone debitage, cores, and two dart points—an untyped Archaic age dart point and a Late Archaic Shumla dart point; both dart points were collected. All artifacts appear to have been manufactured from locally available lithic materials.

Significance: Based on the poor condition of 41PS998, and the surficial nature of this site, 41PS998 is considered to have low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS999 (Off We Go)***

Site Type: Site 41PS999 is a Late Archaic lithic scatter.

Site Area: The site measures 20 meters north-south by 80 meters east-west, encompassing a total area of 0.40 acre.

Landform: Site 41PS999 is situated on a rock bluff and several sloping knolls that overlook

a spring that flows northward into Terneros Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS999 is approximately 3,440 feet AMSL.

Vegetation: The site is covered primarily by creosote and acacia, providing approximately 95 to 100 percent ground surface visibility.

Disturbance: This site has been impacted by severe erosion. An estimated 40 percent of 41PS999 remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS999 was recorded in 2005. The relatively dense lithic scatter actually stretches across a rock bluff and several sloping knolls, but was considered one site that had been subdivided by erosion. Based on the eroded nature of the landform and the appearance of bedrock across a portion of 41PS999, the archeological deposits at this site are estimated to be less than 10 centimeters in thickness.

Artifact Analysis: A Late Archaic Paisano dart point, one mano and one mano fragment were recorded among the other chipped stone cores, debitage, and burned rocks on the site. The dart point was recovered for curation. All artifacts appear to be produced from locally available lithic materials. The majority of cultural material at this site is located on a rock bluff overlooking a spring; one mano and a few pieces of debitage were scattered across a series of sloping knolls.

Significance: No cultural features were observed at 41PS999, and the site has been severely impacted by erosion. As a result, the research potential at 41PS999 is considered to be low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1000 (Sky View)***

Site Type: Site 41PS1000 is a Late Archaic open campsite.

Site Area: The site measures 60 meters northwest-southeast by 170 meters northeast-southwest, encompassing a total area of 2.52 acres.

Landform: Site 41PS1000 is located on an upland toeslope and high terrace overlooking the Terneros Creek drainage.

Soil Type: The site is located within an area identified by the Natural Resources Conservation Service as the Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from approximately 3,520 to 3,540 feet AMSL.

Vegetation: The site is covered primarily by creosote and catclaw acacia, as well as ocotillo and Christmas cholla, resulting in about 90 to 100 percent surface visibility.

Disturbance: The site has been impacted by erosion, animal burrowing/trampling, bulldozing and possibly surface collecting. The site is estimated to be only about 40 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1000 was recorded in 2005. A hearth feature, possible tipi ring, and dart point fragment were document-

ed. The hearth feature measures approximately 2 meters north-south by 3 meters east-west. Numerous additional burned rocks were observed within approximately 5 meters of the hearth. The possible tipi ring measures about 5 meters in diameter, with rocks measuring 10 to 20 centimeters arranged in a circular to oval pattern. Both features are located within the central part of the site. Based on area cutbank examinations, the cultural deposits at 41PS1000 could extend to about 30 centimeters below the ground surface.

Artifact Analysis: Chipped stone debitage is scattered in and around the possible tipi ring, as well as across the remainder of the site. A Late Archaic Figueroa dart point fragment was recovered for curation. Additional artifacts observed at 41PS1000 include cores, bifaces, scrapers, manos, and metates. All artifacts appear to have been produced from locally available lithic materials.

Significance: Despite the generally poor condition of 41PS1000 and the paucity of temporally diagnostic artifacts on this site, intact cultural features are still apparent and there is the potential for some intact buried archeological deposits to remain. As a result, 41PS1000 is considered to have moderate research potential. The site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information) and Criterion 3 (the site possesses unique or rare attributes concerning Texas prehistory and/or history).

Recommendations: It is recommended that site 41PS1000 be nominated for designation as an official State Antiquities Landmark, and it should be monitored on an annual basis.

***41PS1001 (Almost Home)***

Site Type: Site 41PS1001 is an open campsite of unknown prehistoric age.

Site Area: The known site area measures 90 meters north-south by 670 meters east-west, encompassing a total area of 14.89 acres. However, the site extends outside of the present survey corridor for an unknown distance.

Landform: Site 41PS1001 is situated on an upland footslope, toeslope, and high terrace overlooking the Terneros Creek drainage.

Soil Type: The site is located within soils identified by the Natural Resources Conservation Service as 90 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes and 10 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site ranges from approximately 3,460 to 3,480 feet AMSL.

Vegetation: The site is covered primarily with creosote and catclaw acacia, as well as ocotillo and Christmas cholla, resulting in about 90 to 100 percent surface visibility.

Disturbance: The site has been impacted by erosion, deterioration of the cultural features on the site, and animal burrowing/trampling. Nonetheless, 41PS1001 remains approximately 70 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1001 was recorded in 2005. Two hearth features and a burned rock scatter were recorded. One hearth feature measures approximately 1 meter in diameter, while the second hearth measures 2 meters north-south by 1.5 meters east-west. Both hearths are composed of round stones and firecracked rocks (angular and sub-angular

rocks). The burned rock scatter at 41PS1001 measures 3 meters north-south by 2.5 meters east-west. A slab metate was observed within about 5 meters of this feature. Based on area cutbank examinations, the cultural deposits at 41PS1001 are estimated to be less than 20 centimeters in depth. Because a portion of 41PS1001 extends beyond the survey corridor, the site was not investigated completely.

Artifact Analysis: In addition to the burned rocks and metate, the artifact assemblage at this site also includes chipped stone debitage, cores, and bifaces. No diagnostic artifacts were recovered from 41PS1001. All artifacts appear to have been produced from locally available lithic materials.

Significance: Although the full extent of the site is unknown, the portion of the site that was examined is in good condition and includes cultural features and a fairly dense artifact scatter. The site has relatively high research potential and is recommended for nomination as an official State Antiquities Landmark under Criterion 1 (the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information).

Recommendations: Future research in the area should include additional examination of site 41PS1001, in order to determine the site boundary and to identify any additional cultural features or temporally diagnostic artifacts. Site 41PS1001 is recommended for nomination as an official State Antiquities Landmark and should be monitored on an annual basis.

***41PS1002 (Luis')***

Site Type: Site 41PS1002 is a pictograph site of unknown prehistoric age.

Site Area: The site measures 10 meters north-south by 15 meters east-west, encompassing a total area of 0.04 acre.

Landform: Pictographs at 41PS1002 are located on a cliff face overlooking Terneros Creek.

Soil Type: Soils in the vicinity of 41PS1002 have been identified by the Natural Resources Conservation Service as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,440 feet AMSL.

Vegetation: There is no vegetation on the rock surface upon which the pictographs are located.

Disturbance: The pictographs have been impacted by water and weathering. The rock face upon which the pictographs are located is spalling. Nonetheless, the site is estimated to be about 90 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1002 was recorded in 2005. The site includes two pictograph panels, each including several red monochromatic figures that are not readily identifiable as to subject matter. One of the images, however, appears to represent an hour-glass shaped anthropomorphic image. There are no obvious historic representations included in either panel.

Artifact Analysis: No artifacts were found in association with this site.

Significance: Although the pictographs at 41PS1002 are difficult to identify, the overall condition of the site is good and the research potential is moderately high. Site 41PS1002 is recommended for nomination as an official State Antiquities Landmark under Criterion 1 (the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information).

Recommendations: This site is not readily visible from the Terneros Creek Trail, and is unlikely to elicit the attention of trail users. Nonetheless, the site should be monitored annually to track the condition of the pictographs. As funding becomes available, these pictographs should be more thoroughly inventoried through digitally enhanced photography. It is recommended that the site be nominated as an official State Antiquities Landmark.

***41PS1003 (Cairn)***

Site Type: Site 41PS1003 is a possible historic rock cairn (survey marker?) and diffuse lithic scatter of unknown prehistoric age.

Site Area: The site measures 30 meters north-south by 30 meters east-west, encompassing a total area of 0.2 acre.

Landform: The site is situated on an upland hill summit overlooking the north side of Terneros Creek.

Soil Type: Soils in the area of 41PS1003 have been mapped by the Natural Resources Conservation Service as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1003 is about 3,120 feet AMSL.

Vegetation: The site is covered primarily by creosote, various opuntias, and fluff grass, providing approximately 85 to 100 percent surface visibility.

Disturbance: This site has been impacted by erosion, and is estimated to be only about 30 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1003 was recorded in 2005. The cairn at 41PS1003 appears to be aligned on a north-south line with another cairn identified during the survey, Isolated Find #IF.P152.0055; they may mark the boundary of Block 249, Section 16 and the west boundary of Block 313, Section 27. Both of these tracts were associated with Botella Ranch. Based on gravels and cobbles on the surface of site 41PS1003, it is estimated that the site is less than 10 centimeters in depth.

Artifact Analysis: The lithic scatter at this site is very sparse, consisting of one biface fragment, one uniface, five pieces of chipped stone debitage, and a mano. All artifacts were produced from locally available lithic materials.

Significance: The artifact scatter at 41PS1003 is diffuse, and the rock cairn at this site may actually be a historic property boundary marker. As a result, 41PS1003 has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS1004 (Botella Camp)***

Site Type: Site 41PS1004 is a late nineteenth to early twentieth century ranchstead.

Site Area: The site measures 270 meters northwest-southeast by 140 meters east-west, encompassing a total area of 9.3 acres.

Landform: The site is situated on an upland bench/high terrace overlooking the south side of the Botella Spring drainage.

Soil Type: Soils in the site area have been mapped by the USDA Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1004 is approximately 3,160 feet AMSL.

Vegetation: Much of the site, especially within the corrals and driveway, is devoid of vegeta-

tion, providing 100 percent surface visibility in these areas. The remainder of the site is covered primarily by creosote, ocotillo, yucca, various opuntias, and Bermuda grass, providing approximately 50 to 100 percent surface visibility.

Disturbance: This site has been impacted by erosion and some deterioration of the extant structures on the site; the site is estimated to be approximately 80 percent intact.

Previous Investigations: No previous archeological investigations have been undertaken at 41PS1004, but historical research has been previously conducted at this site, including interviews of some of the former occupants/ workers at the ranch. The land ownership history of the property is reported by Ing et al. (Ing et al. 1996:187–188).

Present Investigation: The archeological component at Botella Camp was recorded as site 41PS1004 in 2005. Several extant structures are located at Botella Camp, including an adobe-constructed house and outbuilding, a cinder block well house, a circular rock- constructed cistern, and a series of wooden corrals. A dump and fenced garden area were also documented. The primary archeological component of this site is the dump. Based on observations of erosional exposures, the estimated maximum depth of archeological deposits in this area is approximately 20 centimeters.

Artifact Analysis: Numerous artifacts were observed in the dump area, including whiteware, earthenware, yellow ware, stoneware, and porcelain sherds representing various decorative techniques. Glass artifacts are represented by milk glass, blue glass, pink Depression glass, amethyst, brown, and solarized glass fragments. Gas stove parts, hole-in-top tin cans, muleshoes, horseshoes, Dietz kerosene lantern parts, a white enameled coffee pot, a Bakelite high heel from a woman's shoe, a 1973 Texas license plate, and other artifacts were noted. The median date for the majority of observed artifacts is in the mid-1930s. However, potentially earlier artifacts in the dump may have been masked by subsequent debris that was deposited at the location.

Significance: While the site integrity of 41PS1004 is high, the research potential of this site is considered moderately low. Considerable historical documentation has been previously gathered for the Botella Camp. The present artifact assemblage, at least as it was observed on the surface, can contribute little additional information regarding this site beyond what has already been documented. The site does not appear to meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: Botella Camp will be used as a park staff residence. As a park residence, the surrounding area will be protected against potential vandalism. No further work is recommended at 41PS1004 at this time.

## 2006/2007 FIELD SEASON

### Panhandle Trail

The Panhandle Trail utilizes approximately 28.5 miles of an existing unimproved two-track road, approximately eight feet in width, in the panhandle area of BBRSP, extending from the Botella Camp (aka Botilla Camp) in the south to Cienega Camp at the northern boundary of the state park (Figures 15-17). Part of this route follows the nineteenth century Chihuahua Trail.

The TPWD Archeology Survey Team conducted the archeological survey of the Panhandle Trail corridor November 10 - 20, 2006, February 7 - 13, 2007, and February 18 - 25, 2007. The survey of this corridor encompassed ap-

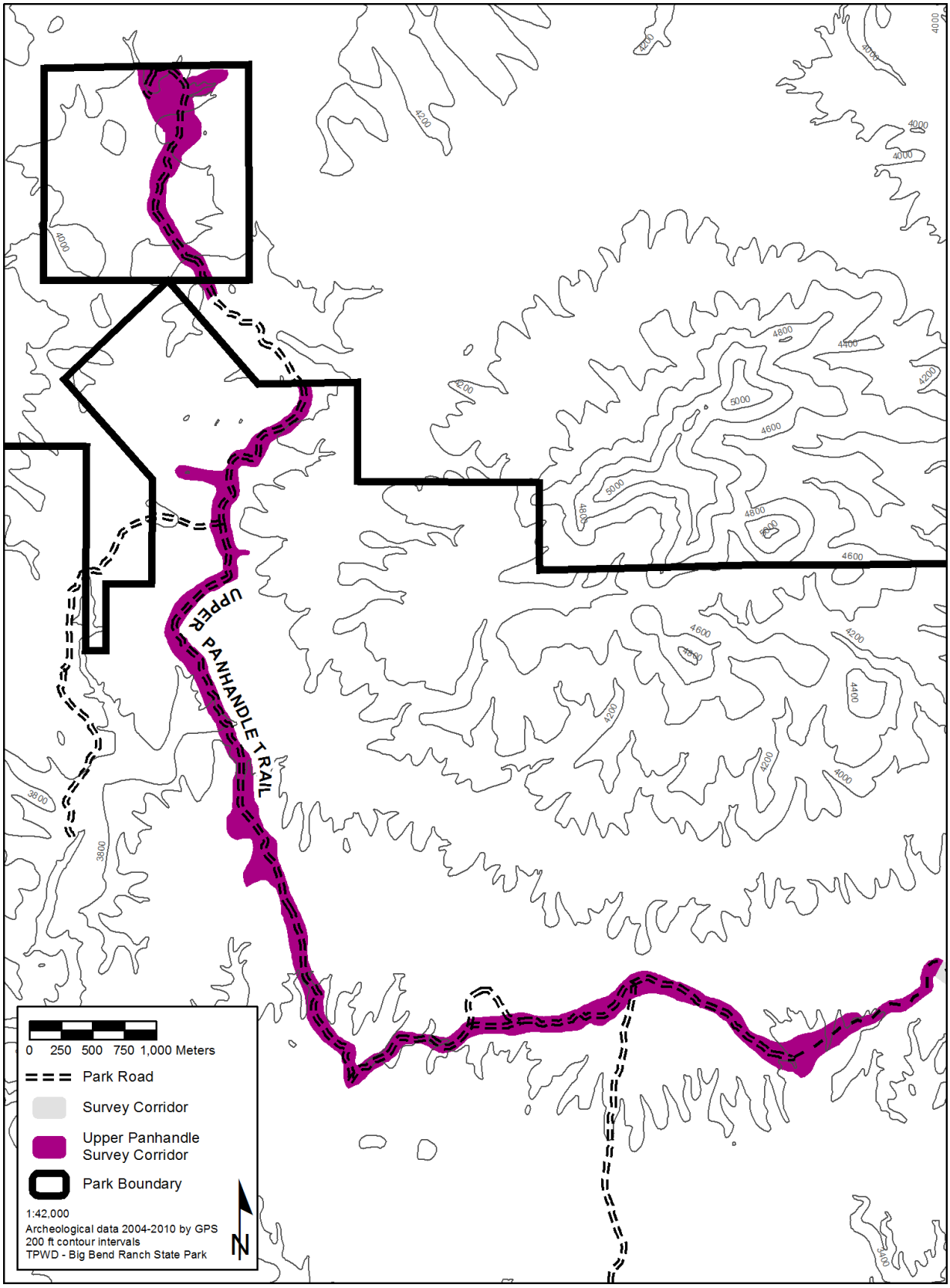


**Figure 15.** Map showing location of Upper Panhandle Trail.

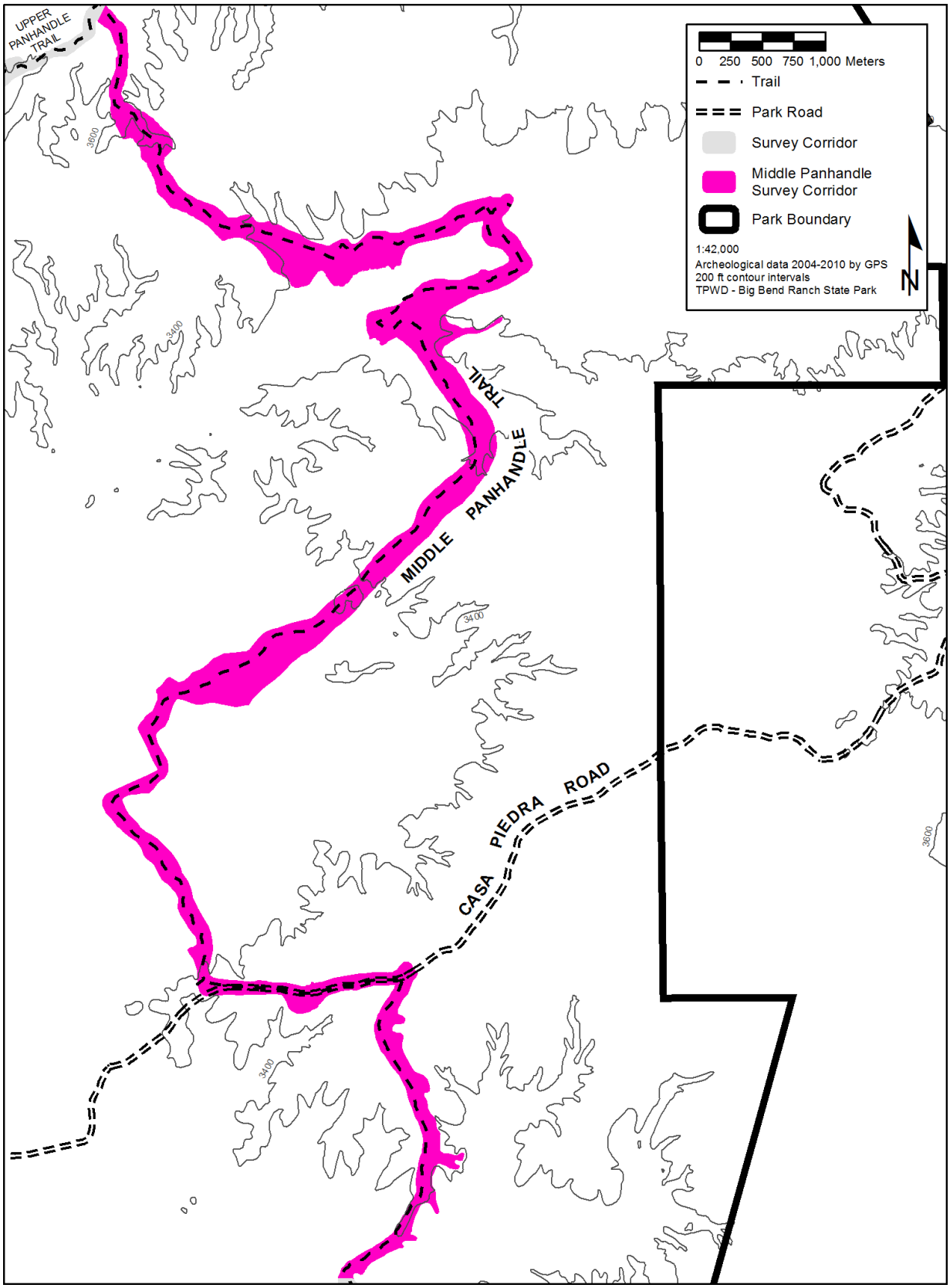


**Figure 16.** Map showing location of Middle Panhandle Trail.

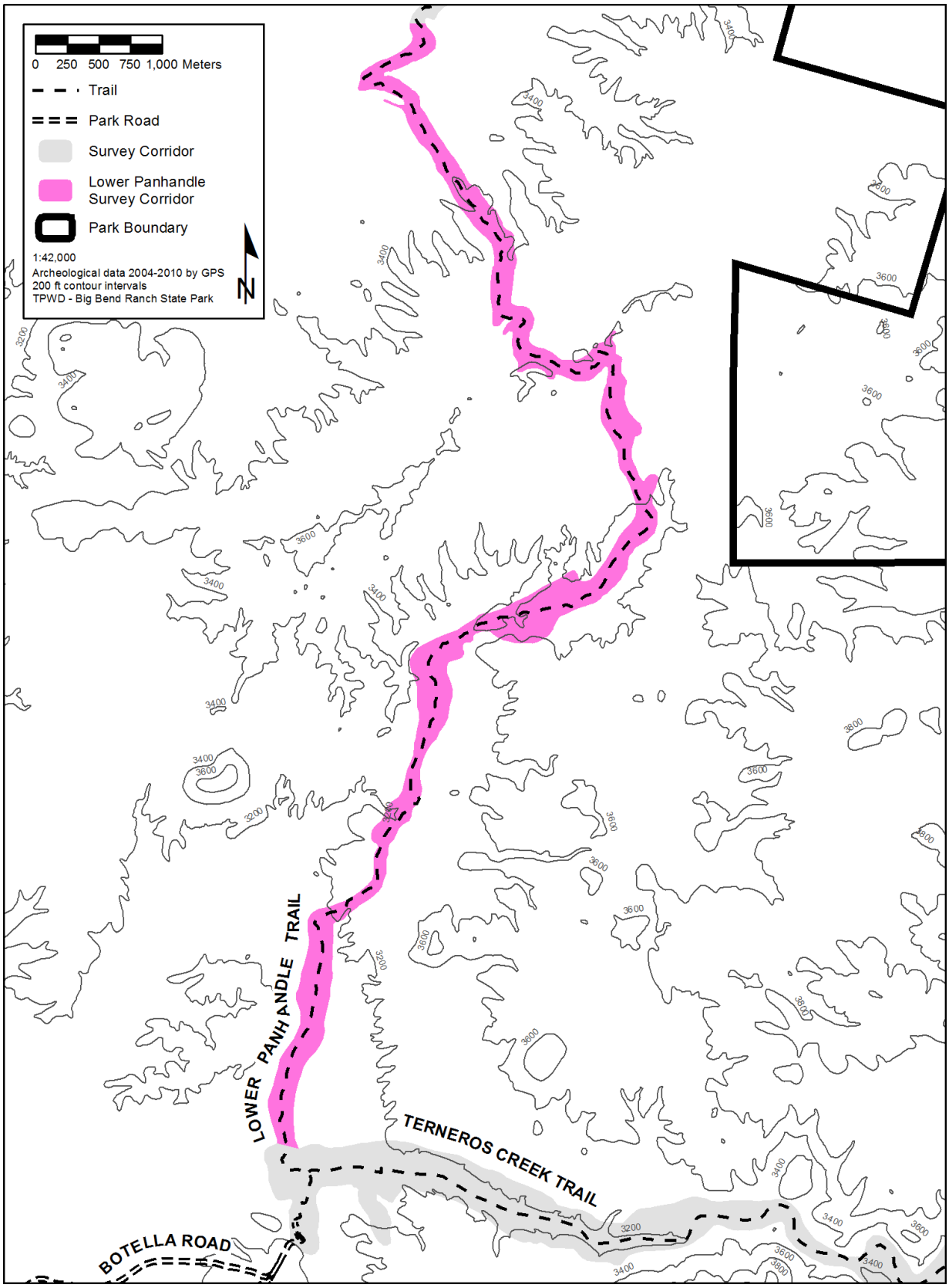


**Figure 17.** Map showing location of Lower Panhandle Trail.

proximately 1,943 acres, and included re-recording 14 previously recorded archeological sites, many of which were incorporated into other nearby sites. Previously recorded sites are 41PS505, 41PS507, 41PS508, 41PS510, 41PS563, 41PS564, 41PS566 (incorporating 41PS450 and 41PS614), 41PS576, 41PS581, 41PS601–603 (incorporating 41PS604), 41PS608, and 41PS609. A total of 31 newly identified sites (41PS1021-1051) and 42 isolated finds were recorded during the survey of the Panhandle Trail corridor. Site descriptions are below. See Appendix A for site summary data and Appendix C for isolated find data.

***41PS505***

Site Type: Site 41PS505 is an Archaic and Late Prehistoric open campsite.

Site Area: The site measures 320 meters northeast-southwest by 100 meters east-west, encompassing a total area of 7.9 acres.

Landform: Site 41PS505 is located on a gently sloping pediment at the confluence of Alamo Seco Creek and an unnamed tributary. Alamo Seco Creek forms the western boundary of the site. Two sizable tinajas are located in the creek bed.

Soil Type: The site is located within an area of soils identified as Studybutte-Rock outcrop complex, 70 percent at 10 to 30 percent slopes and 30 percent at 20 to 60 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,200 to 3,240 feet AMSL.

Vegetation: Site 41PS505 has a sparse cover of ocotillo, creosotebush, catclaw acacia, and various cacti. The overall surface visibility is about 80 to 100 percent.

Disturbances: The site has been impacted by a gravel road, possible bulldozing, sheet erosion, animal burrowing and trampling, and surface collection. The site is approximately 60 percent intact.

Previous Investigations: Site 41PS505 was originally recorded by J. David Ing and William A. Cloud in 1989 (Ing et al. 1996:211).

Present Investigation: This site was re-recorded in 2006. Cultural features recorded include three hearths, consisting of a previously identified hearth, a newly identified hearth, and a hearth previously identified as two separate hearths. Two additional hearths recorded in 1989 have since been dispersed and were recorded during the 2006 investigation as burned rock scatters. Seven boulder metates identified in 1989 were also relocated during the present investigation. Newly discovered features at 41PS505 include a probable burned rock midden roughly 9 meters in diameter and 0.5 meters in relief, a tipi ring roughly 7 meters by 5 meters, consisting of several bowling ball-sized boulders, and a U-shaped possible stone structure 7 meters in length. The age of this feature is unknown; however, a grommet found nearby points to a possible historic component. The maximum depth of cultural deposits at this site is estimated to be less than 10 centimeters.

Artifacts: The original recorders of 41PS505 noted an absence of manos and time-diagnostic artifacts, but reported that lithic debitage of chalcedony and chert common to BBRSP was scattered across the site. The 2006 investigation identified an untyped proximal dart point fragment, lithic debitage, bifaces, scrapers, cores, manos, metates, and a mussel shell fragment. The dart point fragment was collected.

Significance: Site 41PS505 has moderate research potential. The site was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: The size of the site and the nature of the landform in the area preclude the Panhandle Trail from being rerouted. As a result, the condition of the site should be monitored at least biannually, and all prehistoric time-diagnostic artifacts identified during monitoring should be mapped and removed for curation.

***41PS507***

Site Type: Site 41PS507 is an Early Archaic and Late Archaic open campsite.

Site Area: At its widest points, site 41PS507 measures roughly 520 meters north/northeast–south/southwest by 140 meters east-west, encompassing a total area of 18 acres.

Landform: The site is on a low gravel terrace on the right bank of Alamo Seco Creek, at the confluence of the creek with a short side canyon. Alamo Seco Spring is located about 0.56 miles to the northeast.

Soil Type: Site 41PS507 is situated within an area of soils identified as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of the site ranges from 3,390 to 3,410 feet AMSL.

Vegetation: Vegetation includes ocotillo, catclaw acacia, creosotebush, prickly pear, guayacan, lechuguilla, pitaya, Torrey yucca, and mixed grasses, providing approximately 75 percent surface visibility.

Disturbances: Site 41PS507 has been previously impacted by a gravel road, possible bulldozing, sheet erosion, animal burrowing and trampling, and surface collecting. The site is approximately 60 percent intact.

Previous Investigations: Site 41PS507 was originally recorded by J. David Ing and William A. Cloud in 1989 (Ing et al. 1996:212).

Present Investigation: Site 41PS507 was re-recorded in 2006. Cultural features recorded on the site include approximately 31 hearths, four burned rock scatters between 5 meters and 60 meters in diameter, and one ring midden approximately 4 meters by 3 meters in size. The maximum depth of cultural deposits at the site is estimated to be 50 centimeters based on the height and apparent depth of the ring midden.

Artifacts: The original recorders of 41PS507 noted a lack of time-diagnostic artifacts, but reported the presence of manos, hammerstones, and abundant lithic debitage scattered across the site. Three dart points were recovered during the 2006 investigation, consisting of an Early Archaic Pandale point, a Late Archaic Palmillas (Form 2), and a Late Archaic expanding stem dart point fragment (untyped). The dart points were collected for curation. Additionally, lithic debitage, bifaces, cores, manos, 10 slab metates, and shell fragments were identified.

Significance: Site 41PS507 is considered to have high research potential, and was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: A burned rock scatter extends into the Panhandle Trail, but rerouting of the Trail would cause extensive new impacts to the landscape. As a result, culturally sterile fill should be placed on the road within the site area, and the condition of the site should be monitored at least biannually. All time-diagnostic artifacts observed during monitoring should be mapped and collected for curation.

***41PS508***

Site Type: Site 41PS508 is an open campsite of unknown prehistoric age.

Site Area: The site measures 50 meters north-south by 100 meters east-west, encompassing a total area of 1.2 acres.

Landform: Site 41PS508 is located near an existing ranch road on the inside of a bend of Alamo Seco Creek, just above the floodplain.

Soil Type: The site is located within an area identified by the Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is roughly 3,320 feet AMSL.

Vegetation: Vegetation includes ocotillo, creosotebush, prickly pear cactus, tasajillo, catclaw acacia, whitethorn acacia, and mixed grasses. Surface visibility is 75 percent.

Disturbances: The site has been impacted by sheet erosion, possible surface collection, and animal burrowing and trampling. In addition, an unimproved gravel road cuts across the east edge of the site and a mechanically excavated area, roughly 6 meters in diameter and 1 meter deep, is located in the northeast part of the site. Site 41PS508 is estimated to be 40 percent intact.

Previous Investigations: Site 41PS508 was originally recorded in 1989 by J. David Ing and William A. Cloud (Ing et al. 1996:211).

Present Investigation: Site 41PS508 was re-recorded in 2006. Five boulder metates and scattered burned rocks were found across the site. A mechanically excavated area was located in the northeastern portion of the site measuring approximately 6 meters in diameter and 1 meter deep; the function and age of this feature is unknown. Modern debris found inside the feature suggests a late twentieth century component. The maximum depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: No temporally diagnostic artifacts were found at 41PS508 during the 1989 or 2006 investigations. Prehistoric artifacts include lithic debitage, expedient flake tools, cores, manos, and metates. A few twentieth century artifacts were identified within the excavated feature, including a piece of milled lumber, wire nails, and a soft drink can.

Significance: The research potential of 41PS508 is considered low based on the shallow soils, the lack of cultural features, and the lack of time-diagnostic artifacts. Nonetheless, 41PS508 was previously listed as an official State Archeological landmark on September 20, 1991.

Recommendations: Official State Archeological Landmark status of 41PS508 should be reviewed and the site considered for delisting as an official State Antiquities Landmark. No other work is recommended.

***41PS510***

Site Type: Site 41PS510 is a Late Archaic and twentieth century open campsite.

Site Area: The site measures 180 meters north-south by 190 meters east-west, encompassing a total area of 8.4 acres.

Landform: The site is situated on a gently sloping gravel pediment overlooking Alamo Seco Creek to the north. This site is an extension of 41PS505, located on the opposite side of the drainage.

Soil Type: The Natural Resources Conservation Service has mapped soils in the 41PS510 site area as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS510 ranges from 3,200 to 3,230 feet AMSL.

Vegetation: The site is covered primarily by creosotebush, catclaw acacia, and various opuntias. Surface visibility ranges from 90 to 100 percent.

Disturbances: Site 41PS510 has been impacted by sheet wash erosion, animal trampling, and a ranch road that bisects the site. The site appears to be approximately 60 percent intact.

Previous Investigations: Site 41PS510 was originally recorded by William A. Cloud and J. David Ing in 1989 (Ing et al. 1996:211).

Present Investigation: Site 41PS510 was re-recorded in 2006. Documented prehistoric features include 18 hearths, most with associated metates, and two burned rock scatters. Two twentieth century features were identified as well, consisting of a stone chiquera (baby goat shelter) and a hearth with associated beer can. Other rock clusters nearby may represent additional collapsed chiqueras. Several hearths appear to be recent and brown glass beer bottles litter the site. The maximum depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: Prehistoric artifacts recorded at 41PS510 include a Late Archaic expanding stem dart point fragment (untyped), bifaces, scrapers, cores, manos, 13 metates, and chipped stone debitage of chert, chalcedony, and rhyolite. The dart point fragment was collected. Historic artifacts noted on the site include beer cans and brown glass beer bottles.

Significance: Site 41PS510 has a moderate research potential. The site was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: This site is bisected by an existing ranch road (i.e., the Panhandle Trail), and has suffered from previous relic hunting. The distribution of archeological sites in this area and the nature of the landform preclude the trail route from being relocated. As a result, the condition of the site should be monitored on at least a biannual basis, or as justified by visitation to this part of BBRSP. All time-diagnostic artifacts identified during monitoring should be mapped and collected.

***41PS563 (Mad Dog Butte)***

Site Type: Site 41PS563 is a Late Prehistoric Cielo complex site and rockshelter habitation site. The rockshelter habitation may include a historic component.

Site Area: The site measures 80 meters northeast-southwest by 40 meters east-west, encompassing a total area of 0.8 acre.

Landform: Mad Dog Butte is a free standing landform that offers excellent views in all directions, particularly along Cienega Creek. Its slopes are steep and covered in loose gravel.

Soil Type: Soils in the area of 41PS563 have been identified as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS563 ranges from about 4,040 to 4,120 feet AMSL.

Vegetation: Site 41PS563 has a sparse cover of ocotillo, creosotebush, catclaw acacia, and various cacti. The overall surface visibility is about 70 percent.

Disturbances: This site has been impacted by erosion, and a roof fall in the rockshelter. The site is approximately 90 percent intact.

Previous Investigations: Site 41PS563 was originally recorded by Robert J. Mallouf in 1992, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:84; 213).

Present Investigation: Site 41PS563 was re-recorded in 2007. Prehistoric cultural features documented on the site consist of five circu-

lar stacked rock Cielo complex features, a rock wall along the butte edge, and a rockshelter with associated talus deposit near the base of the butte. All features except the rockshelter were originally identified during the 1992 survey. In addition to a talus containing debitage and burned rocks, the rockshelter has a black sooted ceiling and contains four wooden posts, suggesting historic use of the shelter. The maximum depth of cultural deposits is estimated to be less than 20 centimeters.

Artifacts: All visible artifacts were collected from this site by archeologists during the 1992 recording of this site. Only five or six pieces of lithic debitage were observed on the surface of the site during the 2007 investigation. Four wooden posts were documented in the rockshelter and the associated talus deposit contains burned rock and lithic debitage.

Significance: Site 41PS563 is estimated to be approximately 90 percent intact and has high research potential. The site was designated as an official State Archeological Landmark on October 26, 2007.

Recommendations: Mad Dog Butte is readily visible from the Panhandle Trail and there is a possibility that trail users may access the site. But, Cielo deposits, including those at 41PS563, are generally sparse and do not draw the attention of relic hunters. Furthermore, this site has now been professionally investigated on at least two occasions, and time-diagnostic artifacts, as well as many non-diagnostic artifacts, have been recovered from the site. Nonetheless, this site should be monitored annually to assess the condition of the site.

***41PS564 (Three Shaman)***

Site Type: Site 41PS564 is a multi-component Archaic and Late Prehistoric rockshelter habitation site with a pictograph panel.

Site Area: The site measures 60 meters north-south by 35 meters east-west, encompassing a total area of 0.5 acre.

Landform: The Three Shaman Shelter is located on the west side of an unnamed arroyo to Cienega Creek. The shelter is in a low bluff of volcanic bedrock and faces east, overlooking the arroyo.

Soil Type: Soils in the site area have been identified as Horsetrap-Bofecillos-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 3,680 to 3,760 feet AMSL.

Vegetation: Vegetation includes creosotebush, ocotillo, prickly pear, Torrey yucca, and mixed grasses, providing approximately 80 percent surface visibility.

Disturbances: Site 41PS564 has been impacted by erosion, deterioration of the pictographs, animal trampling, possible surface collection, uncontrolled excavation (pothole noted in 1992), and a roof fall in the shelter. The site is approximately 80 percent intact.

Previous Investigations: This site was originally recorded by Robert J. Mallouf in 1992, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:216).

Present Investigation: Site 41PS564 was re-recorded in 2007. Cultural features recorded consist of a rockshelter with two alcoves, two talus deposits with burned rocks and debitage, midden–stained soil, and a pictograph panel. The pictographs consist of three faint anthropomorphic figures of various sizes. The condition of the site was found to be unchanged from its 1992 description, including the pothole in the rear of the shelter. Updated loca-

tion information was recorded. The maximum depth of cultural deposits is estimated to be 20 centimeters.

Artifacts: Dart point fragments and one Late Prehistoric Perdiz arrow point were reported in 1992. No time-diagnostic artifacts were observed at 41PS564 in 2007. Other prehistoric artifacts noted include lithic debitage, expedient flake tools, bifaces, scrapers, cores, manos, and metates. Among the few twentieth century artifacts identified at the site were tin cans.

Significance: The research potential of 41PS564 is high. The site was designated as an official State Archeological Landmark on October 26, 2007.

Recommendations: The Three Shaman Shelter (41PS564) can be seen from the existing ranch road (i.e., Panhandle Trail), and was partially looted some time prior to being recorded in 1992. The archeological site distribution and nature of the landforms in this area prevent rerouting of the existing trail. This site should be monitored on at least a biannual basis, and the locations of any time-diagnostic artifacts should be mapped and the items gathered for curation. Furthermore, the pictographs at this site should be thoroughly documented.

***41PS566 (Cat Spring; includes 41PS614 and 41PS450)***

Site Type: Site 41PS566 is a multi-component Late Archaic and Late Prehistoric open campsite and rockshelter habitation, and a twentieth century ranching site.

Site Area: Site 41PS566 measures about 330 meters north-south by 220 meters east-west, encompassing a total area of 18 acres.

Landform: The Cat Spring site is located in the foothills south of the Cienega Mountains. Although the spring is presently almost dry, it appears to have once been a significant water source.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as 70 percent Manzanillo and Paisano soils, 1 to 30 percent slopes, and 30 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of the site ranges from about 3,550 to 3,580 feet AMSL.

Vegetation: Vegetation at 41PS566 is typical Chihuahuan Desert scrub, including creosotebush, ocotillo, sotol, prickly pear, Torrey yucca, and mixed grasses. The spring area is heavily vegetated with thorny brush and a single cottonwood tree. Surface visibility is approximately 50 percent.

Disturbances: This site has been impacted by erosion, an existing ranch road, animal burrowing and trampling, extensive livestock grazing, recent visitation (a shovel blade was found in the rockshelter), and possible artifact collecting. The site is estimated to be approximately 70 percent intact.

Previous Investigations: Site 41PS566 was originally recorded by Robert J. Mallouf in 1993, and is reported in Archeology of the Cienega Mountains of Presidio County, Texas (Mallouf 1993:14) and Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:211).

Present Investigation: The Cat Spring site was re-recorded in 2007. Prehistoric features identified at 41PS566 include three burned rock scatters (two which were newly identified), three burned rock middens (two of these features were originally recorded as ring middens in 1993; however, no discernible central pits were observed in 2007), two ring middens (three recorded in 1993, but only two could be relocated during the present survey), and a newly identified rockshelter and an associated

talus deposit. This rockshelter, which is located to the far south of the original site boundary, contains two alcoves. One alcove measures approximately 4.5 meters wide by 5.7 meters deep by one meter high; the other alcove measures 7 meters wide by 4.5 meters deep by 1.4 meters high. The rockshelter has a substantial talus deposit of chipped stone debitage and burned rock. In addition, two historic circular concrete water troughs, roughly 1.4 meters (4.6 feet) and 3.2 meters (10.6 feet) in diameter, were found at the site. The smaller trough is inscribed with "MA 30 1944." The previously identified burned rock scatter located west of Cat Spring was originally recorded as a separate site, 41PS614. However, during the 2007 investigation it was found that this burned rock scatter is within a much larger artifact scatter that covers both site areas. Therefore, in keeping with Texas Archeological Research Laboratory policy, both sites were subsumed under the lower trinomial 41PS566. Additionally, in 1988 site 41PS450 was mapped approximately 250 meters southwest of Cat Spring based on information provided by an informant; however, the site was apparently never visited by an archeologist. The mapped location of this site was visited during the present survey, but no artifacts or features were found. The artifact assemblage reported for 41PS450 on the original site form is similar to that observed at 41PS566 in 2007. It appears likely that the informant in 1988 was actually referring to site 41PS566, which is located near the plotted location of 41PS450. The maximum depth of cultural deposits at 41PS566 is estimated to be 70 centimeters based on the relief of the ring middens.

Artifacts: Three dart points and one arrow point were recovered from site 41PS566 during the 2007 investigation. The points were identified as one Late Archaic Shumla dart point, one Late Archaic expanding stem dart point fragment (untyped), one Late Archaic Figueroa dart point fragment, one untyped contracting stem dart point, and one Late Prehistoric Clifton/Perdiz arrow point preform. An obsidian flake and an obsidian nodule were also collected. The arrow point/preform, the obsidian flake, and burned rocks were found in the talus deposits below the rockshelter. Additional prehistoric materials observed at 41PS566 include bifaces, scrapers, expedient flake tools, cores, debitage, manos, and metates. Historic artifacts and modern debris were also noted at the site. These include a shovel blade and cigarette butt found in the rockshelter, as well as vessel glass and cans found across the site.

Significance: The Cat Spring Site has high research potential, and was designated as an official State Archeological Landmark on October 26, 2007. Additionally, site 41PS450, which now appears to be the same site as 41PS566, was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: The Panhandle Trail passes through 41PS566, and the rockshelter at this site is readily visible from the trail route. A ring midden is also bisected by the existing trail/road and will be obvious to trail users. The spring itself, which is noted on the USGS 7.5' quadrangle map of this area, will be a likely attraction for trail users. As a result, this site should be monitored on a quarterly basis or as dictated by visitation in this area of BBRSP. Furthermore, it is recommended that site 41PS614 be merged with site 41PS566 in the site records, and that the site record for 41PS450, including the official State Archeological Landmark designation, be deleted or amended to report that no site exists at the original plotted location and that the record likely refers to 41PS566.

***41PS576 (Cienega Camp)***

Site Type: Site 41PS576 is a multi-component Early, Middle, and Late Archaic open campsite, and twentieth century ranching complex.

Site Area: The site measures 390 meters north-south by 290 meters east-west, encompassing a total area of 27.9 acres.

Landform: Cienega Camp is situated on a mostly level, high terrace above the east bank of Cienega Creek.

Soil Type: Site 41PS576 is located within an area of soils identified by the USDA Natural Resources Conservation Service as Tenneco-Bodecker complex, 0 to 3 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site is approximately 4,000 feet AMSL.

Vegetation: Vegetation across the site area is typical Chihuahuan Desert scrub, including Russian thistle, creosotebush, mesquite, and prickly pear, with some black willow along Cienega Creek. Surface visibility is approximately 60 percent.

Disturbances: Site 41PS576 has been impacted by erosion, a former ranch road, bulldozing, plowing, animal burrowing and trampling, and deterioration of structures. Furthermore, the prehistoric component of the site has been significantly impacted by the historic occupation of the site. The prehistoric component is estimated to be only 30 percent intact, while the historic component is estimated to be 50 percent intact.

Previous Investigations: The site was originally recorded by Joseph Sanchez, William A. Cloud, Eric Powell, and Anne Jung in 1993, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:193).

Present Investigation: Cienega Camp was re-recorded in 2007. The cultural features identified at 41PS576 are limited to the historic component, no prehistoric features were identified. Based on oral histories, the ranching complex dates from the early 1900s through the 1970s. The ranch house was built by John and Minnie Pool around the turn of the century, and has associated animal pens, two concrete troughs, fence enclosures, a water tower, and a windmill, as well as three dams and a road embankment along Cienega Creek. The cultural deposit at the site is estimated to be approximately 30 centimeters thick based on the nature of the alluvial terraces within the site area.

Artifacts: Historic artifacts found at the site in 2007 include vessel glass, window glass, cans, wire nails, metal implements, whiteware ceramic sherds, and decal-decorated porcelain sherds. Prehistoric time-diagnostic artifacts recovered from 41PS576 are one Early Archaic Bandy/Martindale dart point, one Middle Archaic contracting stem dart point fragment (untyped), two Late Archaic Palmillas dart point fragments (Form 1), one Late Archaic Palmillas dart point fragment (Form 2), one Late Archaic expanding stem dart point (untyped), one Late Archaic Frio dart point fragment, one Late Archaic Figueroa dart point fragment, and one unidentified dart point fragment. Additional prehistoric artifacts observed on the site include bifaces, scrapers, cores, and chipped stone debitage. Four pieces of obsidian debitage were collected.

Significance: Cienega Camp has a moderately low research potential, and does not merit designation as an official State Antiquities Landmark.

Recommendations: The proposed Panhandle Trail (i.e., ranch road) terminates at the ranch house located at 41PS576. The prehistoric component of the site has been extensively impacted by the historic occupation of the ranchstead, but time-diagnostic artifacts were still present at the time of this survey. The site

should be monitored biannually or as dictated by the presence of visitors to this part of BBRSP, and all prehistoric time-diagnostic artifacts mapped and removed for curation.

***41PS581***

Site Type: Site 41PS581 is a lithic scatter of unknown Archaic age.

Site Area: At its widest points, 41PS581 measures 140 meters northwest-southeast by 60 meters southwest–northeast, encompassing a total area of 2.1 acres.

Landform: Site 41PS581 is located on a rise overlooking an unnamed tributary to Cienega Creek. The Three Shaman Shelter (41PS564) is located just east of and below the site.

Soil Type: The site is located within an area of soils identified by the USDA Natural Resources Conservation Service as Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,720 to 3,760 feet AMSL.

Vegetation: Vegetation at 41PS581 is typical Chihuahuan Desert scrub, including creosotebush, whitethorn acacia, lechuguilla, ocotillo, cholla, leatherstem, prickly pear, Mormon tea, and bunch grasses. Surface visibility is 90 percent.

Disturbances: This site has been impacted by erosion and animal burrowing, and is estimated to be only 30 percent intact.

Previous Investigations: Site 41PS581 was originally recorded by Frank Garcia, Barbara Baskin, and Patrick Hajovsky in 1993, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:212).

Present Investigation: Site 41PS581 was re-recorded in 2007. A mano, metate, and possible hearth that were observed in 1993 could not be relocated in 2007. It is possible that the original site map is inaccurate or that naturally fractured rocks were mistaken as a hearth. In any case, minimal evidence for site 41PS581 was observed during the present investigation. The depth of cultural deposits is estimated to be less than 10 centimeters, as the site sits on an erosional hilltop.

Artifacts: Artifacts observed in 1993 include an untyped dart point, mano, metate, bifaces, scrapers, and debitage manufactured from a wide variety of lithic materials. Artifacts identified during the 2007 survey include a biface fragments, scrapers, and debitage.

Significance: Site 41PS581 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The differences in archeological manifestations described for 41PS581 between 1993 and 2007, including a possible hearth feature that could not be relocated and several large artifacts that appeared to be missing from the site, may suggest that relic hunting has occurred on the site. Nevertheless, 41PS581 is located approximately 250 meters west of the Panhandle Trail and is an unlikely target for vandalism. No further work is recommended at this site.

***41PS601 (Trestle Site)***

Site Type: Site 41PS601 is a Late Archaic and probable Late Prehistoric open campsite, and a Protohistoric/Historic to twentieth century artifact scatter.

Site Area: At its widest points, site 41PS601 measures 570 meters northeast-southwest by 210 meters north-south, encompassing a total area of 29.6 acres.

Landform: The site is located on an erosionally dissected high silt terrace north of Alamito Creek, at the confluence of the creek with a northwest trending arroyo. An east- west railroad trestle forms the northern boundary of the site.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as 80 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded, and 20 percent Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS601 ranges from 3,300 to 3,340 feet AMSL.

Vegetation: Vegetation in the site area is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, and bunch grass. Surface visibility is approximately 70 percent.

Disturbances: The site has been impacted by severe erosion, a railroad line, animal burrowing and trampling, and possibly plowing. The site contains numerous deep erosional gullies with burned rock and debitage concentrated in the gully floors. The site is estimated to be only about 40 percent intact.

Previous Investigations: Site 41PS601 was originally recorded by Robert J. Mallouf and Steve Pena in 1993, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:210).

Present Investigation: Site 41PS601 was re-recorded in 2007. Cultural features identified at the site included 10 hearths, both distinct and dispersed, 15 burned rock scatters between two meters and four meters in diameter, a possible Cielo structure measuring approximately 2.3 meters by 2 meters, with openings on the north and south ends, and a rock cairn that is two courses tall. Most of the hearths have been scattered by erosion, but a few appear to be intact. During the 2007 survey, the possible Cielo structure, cairn, and one hearth were found on a knoll north of the railroad tracks in an area that had not been surveyed in 1993. Additionally, a dense concentration of historic and prehistoric artifacts was located on the streamward face of the landform. The thickness of cultural deposits is estimated to be 50 centimeters based on the apparent depth of features exposed in erosional gullies.

Artifacts: Prehistoric artifacts collected at the Trestle site consist of two Late Archaic Frio dart point fragments and one *Olivella* sp. shell bead. Bifaces, scrapers, cores, debitage, burned rocks, manos, and metates were noted. Historic artifacts were found concentrated in an 8-meter area along the stream. Four Conchos Plain sherds, three Mexican lead-glazed earthenware sherds, and two hand-painted white earthenware sherds were recovered. Other historic artifacts noted include fragments of solarized, aqua, olive, brown, and painted vessel glass; cast iron, including a handle, stove parts, and a hook; and other metal implements, such as a bucket, straps, hole-in-top cans, square nails, wire nails, horseshoes, brass fragments, a cartridge, a fence staple, a spoon fragment, an axe head, and a plow tine.

Significance: Though site 41PS601 is estimated to be only approximately 40 percent intact, it retains moderate research potential. The site was designated as an official State Archeological Landmark on October 26, 2007.

Recommendations: Although 41PS601 is situated relatively near the existing Panhandle Trail, a railroad grade is situated between the trail route and the site. Furthermore, there is nothing visible on the site that is likely to attract the attention of trail users. As a result, the probability of vandalism to this site is con-

sidered relatively low. Nonetheless, this site should be monitored annually or as warranted by visitation.

***41PS602***

Site Type: Site 41PS602 is an open campsite of unknown prehistoric age.

Site Area: At its widest points, site 41PS602 measures 170 meters northwest-southeast by 110 meters northeast-southwest, encompassing a total area of 4.6 acres.

Landform: The site is located on an elevated silt terrace south of Alamito Creek, at the confluence of Alamito Creek and an unnamed drainage.

Soil Type: The site is located within an area of soils identified by the USDA Natural Resources Conservation Service as 60 percent Manzanillo-Chilicotal-Holguin association, 1 to 30 percent slopes, and 40 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site ranges from 3,300 to 3,320 feet AMSL.

Vegetation: Vegetation at 41PS602 is typical Chihuahuan Desert scrub, including creosotebush, catclaw acacia, mesquite, prickly pear, and bunch grass. Surface visibility is approximately 60 percent.

Disturbances: The site has been impacted by erosion, game trails, animal burrowing, a ranch road, and possible surface collecting. The site is estimated to be approximately 70 percent intact.

Previous Investigations: Site 41PS602 was originally recorded by Robert J. Mallouf in 1993, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:212).

Present Investigation: Site 41PS602 was re-recorded in 2007. The cultural features identified at the site include a single dispersed hearth that was noted in 1993, as well as two burned rock scatters and one boulder mortar that were newly identified in 2007. The thickness of cultural deposits is estimated to be approximately 40 centimeters based on the nature of the alluvium in the site area.

Artifacts: Artifacts identified at the site include bifaces, cores, debitage, and a single rolled-seam can.

Significance: Site 41PS602 has moderately high research potential and merits designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: Although site 41PS602 is situated near the Panhandle Trail, no evidence of the site is within view of the trail. The likelihood of vandalism to the site is considered relatively low. The site should be nominated for designation as an official State Antiquities Landmark, and should be monitored on an annual basis.

***41PS603 (includes 41PS604, Cowboy Camp)***

Site Type: Site 41PS603 is a Late Archaic and Late Prehistoric open campsite and a Protohistoric/Historic to twentieth century campsite.

Site Area: The site measures 480 meters east-west by 160 meters north-south, encompassing a total area of 19 acres.

Landform: The site is situated on a bluff overlooking the Alamito Creek floodplain, approximately 100 meters south of the creek. The landform is bisected by numerous gullies.

Soil Type: Soils within the 41PS603 site area have been identified by the USDA Natural Resources Conservation Service as 70 percent

Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded, and 30 percent Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,300 to 3,380 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, tasajillo, locust bush, and mesquite. Surface visibility ranges from 75 to 100 percent.

Disturbances: The site has been impacted by severe erosion and gullying, animal burrowing, and a ranch road. The site is estimated to be approximately 70 percent intact.

Previous Investigations: Sites 41PS603 and 41PS604 were originally recorded by Pat Mercado-Allinger and Esther Sloan-Kavanaugh in 1993, and are reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:208; 215).

Present Investigation: Sites 41PS603 and 41PS604 were re-recorded in 2007. During this investigation it was determined that the two trinomials designate concentrations of features within a much larger artifact scatter. As such, both sites were combined under trinomial 41PS603 in keeping with Texas Archeological Research Laboratory recommendations to use the lower number to designate previously recorded sites being combined. Cultural features identified at combined site 41PS603 include two circular dug-out structures which were dug into a hillside and walled on the side facing the gully. Also, a second group of four or five oval-shaped rock piles oriented in various directions was observed nearby; despite the varied orientation, these features have the appearance of being historic graves. Other features identified at 41PS603 include a cluster of large boulders that may represent a collapsed structure, four stone hearths (three of which were recorded in 1993), four burned rock scatters (only one was identified in 1993), midden-stained soil, and two piles of large rocks, one of which may represent an additional grave based on its size and mounded appearance. The final feature identified at site 41PS603 is a historic artifact concentration originally recorded as site 41PS604. This concentration is approximately 60 meters east-west by 30 meters north-south and contains artifacts dating to the nineteenth and twentieth centuries, including glass fragments, metal implements, ceramic sherds, and a 1865 copper ¼ Real coin. Based on the apparent depth of the midden soils, the cultural deposits at the site are estimated to be up to 40 centimeters thick.

Artifacts: A hammerstone and an arrow point were reported in 1993. Numerous prehistoric and historic artifacts were identified in 2007. Prehistoric artifacts include a Late Archaic Figueroa dart point, bifaces, scrapers, cores, debitage, manos, metates, and burned rocks. Historic artifacts identified in 2007 include vessel glass of clear, brown, light green, solarized purple, olive, and aqua; ceramics, one white earthenware spongeware sherd with red painted floral and annular design, one undecorated whiteware sherd with an unidentifed partial maker's mark, one probable Rockingham ware sherd, two green tin-glazed Mexican earthenware sherds, one green tin-glazed earthenware sherd, and two Mexican earthenware sherds with brown lead glaze; and metal artifacts, including rolled-seam cans, cast iron stove parts, smooth wire, washers, bolts, square nails, wire nails, square nut, iron straps, machine parts, copper rivet, small buckle, horseshoes, barrel hoops, and an 1865 copper ¼ Real coin. The dart point, coin, and pottery were recovered for curation. A total of 56 Conchos Plain sherds and 38 Conchos Red-on-brown sherds were identitied.

Significance: Site 41PS603 has high research potential, and was designated as an official State Archeological Landmark on October 26, 2007.

Recommendations: The Panhandle Trail follows an existing ranch road (and former segment of the Chihuahua Trail) through 41PS603. The nature of the landform and the archeological site in this area precludes the trail from being rerouted around the site. As a result, this site will be monitored at least on a quarterly basis, or as dictated by the level of visitation to this part of BBRSP.

***41PS608***

Site Type: Site 41PS608 is a rockshelter habitation site of unknown prehistoric age.

Site Area: The site measures approximately 20 meters north-south by 20 meters east-west, encompassing a total area of 0.1 acre.

Landform: This small shelter is located at the base of a bluff within an outcrop of Perdiz Conglomerate. The shelter faces north and has a steep talus slope below.

Soil Type: The USDA Natural Resources Conservation Service has identified soils in the vicinity of 41PS608 as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,380 to 3,420 feet AMSL, with the shelter located at 3,400 feet AMSL.

Vegetation: Vegetation on the talus at 41PS608 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility ranges from 75 percent on the talus slope to 100 percent within the shelter.

Disturbances: Site 41PS608 has not suffered many impacts. Minor erosion and roof spalling were the only disturbances observed in 2007. The site is estimated to be approximately 90 percent intact.

Previous Investigations: Site 41PS608 was originally recorded by Robert J. Mallouf and Steve Pena in 1993, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:216).

Present Investigation: Site 41PS608 was re-recorded in 2007. The rockshelter at this site measures 10 meters wide by 2.5 meters deep by 1.3 meters high with a steep talus measuring approximately 18 by 18 meters. No additional features were identified. Although no subsurface investigations were conducted at 41PS608, the depth of cultural deposits is estimated to be 15 centimeters based on the apparent depth of shelter deposits.

Artifacts: Among the few artifacts that were observed at the site were debitage, drills, cores, and burned rocks. Most artifacts were found on the talus. No temporally diagnostic artifacts were observed.

Significance: Site 41PS608 has moderate research potential, and merits designation as an official State Antiquities Landmark because it meets Criterion 2 (integrity) and Criterion 5 (susceptibility to vandalism).

Recommendations: The Panhandle Trail route extends along a former ranch road and passes directly below 41PS608. The rockshelter is visible from the road and is susceptible to potential vandalism. This site should be monitored at least biannually, or as warranted by the level of visitation to this part of BBRSP. This site should be nominated for designation as an official State Antiquities Landmark.

***41PS609 (Honey Hole Shelter)***

Site Type: Site 41PS609 is a rockshelter habitation site dating to the Late Prehistoric period.

Site Area: The site measures approximately 65 meters north-south by 45 meters east-west, encompassing a total area of 0.7 acre.

Landform: The Honey Hole Shelter formed in eroded tuffaceous sandstone overlain by massive Perdiz Conglomerate. The shelter has a southern exposure overlooking an unnamed tributary to Alamito Creek. A nearly level bench is located in front of the shelter, below which the talus deposit drops sharply to the tributary.

Soil Type: The site is located within an area identified as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,320 to 3,400 feet AMSL, with the shelter located at 3,360 feet AMSL.

Vegetation: Vegetation on the talus at 41PS609 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility ranges from 90 to 100 percent.

Disturbances: The site has been impacted by erosion, spalling, animal trampling, graffiti, and possible surface collection, and is estimated to be approximately 75 percent intact.

Previous Investigations: The Honey Hole Shelter was originally recorded by Esther Sloan–Kavanaugh and Pat Mercado-Allinger in 1993, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:216).

Present Investigation: Site 41PS609 was re-recorded in 2007. The rockshelter measures 23 meters wide by 5 meters deep by 5 meters high, with a talus measuring approximately 60 by 45 meters. Three bedrock mortars were identified near the back wall of the rockshelter and thick midden-stained soil was recorded on the talus. The roof of the shelter is heavily sooted. Although no subsurface investigations were conducted, the depth of cultural deposit is estimated to be 50 centimeters, based on the apparent depth of the midden soil.

Artifacts: A possible Late Prehistoric Perdiz arrow point was recovered from the site during the 1993 survey. Artifacts identified at the site during the 2007 investigation include bifaces, scrapers, expedient flake tools, cores, debitage, manos, metates, mussel shell, and burned rock. A few fragments of modern clear bottle glass were observed in the shelter.

Significance: Site 41PS609 has moderately high research potential, and was designated as an official State Archeological Landmark on October 26, 2007.

Recommendations: The Panhandle Trail follows a former ranch road which passes near 41PS609. The Honey Hole Shelter is readily visible from the route, however it is not possible to reroute the trail in this area. Interpretive signage may be used to help prevent vandalism to the site. Furthermore, this site should be monitored on at least a quarterly basis, or as warranted by the visitation to this part of BBRSP.

***41PS1021***

Site Type: Site 41PS1021 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 60 meters north-south by 50 meters east-west, encompassing a total area of 0.7 acre.

Landform: The site is situated on a deflated desert pavement east of a tributary to Alamo Seco Creek.

Soil Type: Site 41PS1021 is located within an area identified by the USDA Natural Resources Conservation Service as Redford and Corazones soils 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,520 to 3,560 feet AMSL.

Vegetation: Vegetation on the site is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and ocotillo. Surface visibility is approximately 80 percent.

Disturbances: Site 41PS1021 has been impacted by erosion, a former ranch road, and animal burrowing/trampling. The site is estimated to be less than 20 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1021 was recorded in 2006. No cultural features were identified. Although no subsurface investigations were conducted, the depth of cultural deposits is estimated to be less than 10 centimeters due to the site's location on a deflated desert pavement.

Artifacts: The artifacts observed at this site include bifaces, fewer than 20 pieces of chipped stone debitage, and one mano. All items appear to have been produced from locally available materials.

Significance: Site 41PS1021 is estimated to be less than 20 percent intact and has low research potential. Site 41PS1021 does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: The Panhandle Trail crosses the eastern part of this site, but no cultural features or time-diagnostic artifacts are present to draw the attention of trail users. No further work is recommended.

***41PS1022***

Site Type: Site 41PS1022 is a lithic scatter and open campsite of unknown prehistoric age.

Site Area: The site measures approximately 160 meters north-south by 110 meters east-west, encompassing a total area of 4.3 acres.

Landform: The site straddles the north and south banks of Alamo Seco Creek. The area is relatively level, but most artifacts were observed above the floodplain on deflated desert pavement.

Soil Type: The Natural Resources Conservation Service has identified soils in the area of 41PS1022 as approximately 70 percent Studybutte-Rock outcrop complex, 10 to 30 percent slopes, and 30 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of 41PS1022 ranges from 3,340 to 3,380 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub including, creosotebush, prickly pear, catclaw acacia, sotol, Torrey yucca, and bunch grasses; surface visibility is approximately 75 percent.

Disturbances: Site 41PS1022 has been impacted by erosion, animal burrowing and trampling, and a former ranch road. The site is estimated to be about 40 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1022 was recorded in 2006. Features identified at the site

include a lithic concentration and a modern hearth. Although no subsurface investigations were conducted, the depth of cultural deposits is estimated to be approximately 10 centimeters due to the location of the site on a deflated desert pavement.

Artifacts: Artifacts identified at the site include bifaces, scrapers, cores, debitage, manos, five metates, burned rocks, and a horseshoe. The lithic concentration appears to be a chipping station; nine cores and 42 pieces of debitage were collected. No time-diagnostic artifacts were observed.

Significance: Site 41PS1022 is estimated to be approximately 40 percent intact, and has a moderately low research potential. Site 41PS1022 does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: The Panhandle Trail runs along the northern boundary of 41PS1022, but most of the cultural material is located approximately 15 meters south of the trail. No further work is recommended.

***41PS1023 (Vision Quest)***

Site Type: Site 41PS1023 is a possible vision quest site that may date to the Late Prehistoric or Historic periods.

Site Area: At its widest points, the site measures approximately 70 meters northwest-southeast by 40 meters northeast-southwest, encompassing a total area of 0.7 acre.

Landform: The site is located on an upland summit overlooking a small canyon system and Alamo Seco Creek to the south.

Soil Type: Site 41PS1023 is located within an area identified by the USDA Natural Resources Conservation Service as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,360 to 3,410 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, and bunch grasses. Surface visibility is 60 percent.

Disturbances: Minimal erosion was the only observed disturbance. The site is estimated to be approximately 90 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1023 was recorded in 2006. Cultural features observed at the site consist of eight circular stacked rock features, one rock alignment, and a bedrock mortar. The circular stacked rock features are between two meters and five meters in diameter and are stacked up to three courses high. Three features are semicircular enclosures and five are complete circles. Although the exact age and function of these features is unknown, the presence of a few pieces of chipped stone debitage suggests the site is prehistoric. Furthermore, the features are on the edge of a prominent landform, overlooking a drainage, which is the ideal setting for a Late Prehistoric Cielo complex site. The features at this site bear a resemblance to vision quest sites of the northern Great Plains and may represent one of the few vision quest sites presently known in the Big Bend region, and the only such site known on BBRSP. Nevertheless, a historic age for the site is also possible. The depth of cultural deposits on the site is estimated to be less than 10 centimeters, based on the site's location on a hilltop with no depositional soils.

Artifacts: The only artifacts identified at 41PS1023 were a few pieces of chipped stone debitage. A quartz geode, presumably a manuport, was noted on the surface in one of the circular stacked enclosures. No tools or time-diagnostic artifacts were observed.

Significance: The Vision Quest site is estimated to be 90 percent intact, with moderately high research potential. The site was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: This site is located on a high, prominent landform and may draw the attention of trail users. However, artifacts on this site are limited to a few pieces of chipped stone debitage, and are unlikely to elicit the attention of trail users. As the only site on BBRSP recognized as a possible vision quest site at this time, the cultural features at 41PS1023 have been thoroughly mapped and recorded. No further work is recommended at this time.

***41PS1024 (Vasquez House)***

Site Type: Site 41PS1024 is a twentieth century ranchstead and lithic scatter of unknown prehistoric age.

Site Area: At its widest points, the site measures approximately 400 meters northeast-southwest by 70 meters southeast-northwest, encompassing a total area of 6.9 acres.

Landform: Site 41PS1024 is a linear site, stretching southwest to northeast along Black Hills Creek. The site is located above the floodplain north of Black Hills Creek and south of an existing ranch road (Panhandle Trail).

Soil Type: Soils in the site area have been identified by the USDA Natural Resoruces Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1024 ranges from 3,290 to 3,310 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, ocotillo, and bunch grasses. Surface visibility is approximately 75 percent.

Disturbances: Impacts to 41PS1024 include erosion, deterioration of structures, construction of a former ranch road, animal burrowing and trampling, and the establishment of a recent hearth. The site is estimated to be about 60 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1024 was recorded in 2006. Investigators recorded an adobe residential ruin, a recent hearth with charcoal, a well, a water tank, a barbed wire fence, corrals, and pens. The adobe ruin consists of two partially collapsed walls forming a 13.5 feet by 14.4 feet structure. The tank is inscribed with the date “Diciembre—1915.” No prehistoric features were identified. The depth of cultural deposits is estimated to be less than 10 centimeters, as cultural deposits appear to be limited to the ground surface.

Artifacts: Prehistoric materials recorded at this site include chipped stone debitage, cores, bifaces, and burned rocks. Historic artifacts identified include green, clear, brown, and solarized glass; a coffee can, a sardine can, a ham can, a soup can, a baking powder can, a lard can, a kerosene can, and a motor oil can; a SuperX .30–06 cartridge; smooth wire and barbed wire; wire nails; milled lumber; cast iron stove fragments; and ceramics including whiteware and decal-decorated earthenware.

Significance: Site 41PS1024 has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The Panhandle Trail borders the north side of the site, but no significant cultural features or artifact deposits are likely to be impacted by trail users. Archival research, and possibly oral histories, could be conducted to more fully document the history of the ranchstead and determine the appropriateness of interpreting the site.

***41PS1025 (Black Hills Divide)***

Site Type: Site 41PS1025 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 60 meters north-south by 70 meters east-west, encompassing a total area of one acre.

Landform: The Black Hills Divide site is situated on an upland saddle separating northwest trending tributaries of Black Hills Creek from south trending tributaries of Alamo Seco Creek. Buttes rise to the east and west of the site, while the landform slopes downward to the north and south.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as 60 percent Redford and Corazones soils, 10 to 30 percent slopes, and 40 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1025 is approximately 3,520 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is approximately 75 percent.

Disturbances: Site 41PS1025 has been impacted by erosion, animal burrowing and trampling, and the construction of a former ranch road. The site is estimated to be only 30 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1025 was recorded in 2006. No cultural features or time-diagnostic artifacts were identified during the investigation. The depth of cultural deposits is estimated to be less than 10 centimeters based on the extensive erosional surface across the site.

Artifacts: The artifact assemblage at the Black Hills Divide site is small and includes a few pieces of chipped stone debitage, bifaces, and cores. No time-diagnostic artifacts were identified.

Significance: Site 41PS1025 is estimated to be only 30 percent intact and has low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: This site is bisected by the Panhandle Trail, but no cultural features or time- diagnostic artifacts are present to draw the attention of trail users. No further work is recommended.

***41PS1026***

Site Type: Site 41PS1026 is a lithic scatter of unknown prehistoric age, and twentieth century cairns with historic debris.

Site Area: The site measures approximately 110 meters north-south by 170 meters east-west, encompassing a total area of 4.6 acres.

Landform: Site 41PS1026 is located at the confluence of an unnamed arroyo with Black Hills Creek. The site is situated above the floodplain on the north side of the creek.

Soil Type: Soils in the site area have been identified by the USDA Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,280 feet AMSL.

Vegetation: Vegetation in the area of 41PS1026 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is approximately 80 percent.

Disturbances: Site 41PS1026 has been impacted by erosion, animal burrowing and trampling, and the construction of a former ranch road. In addition, the prehistoric component has been impacted by the historic component. The site is estimated to be 50 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1026 was recorded in 2006. Two rock cairns were identified. One cairn consists of four loosely stacked rocks and the other consists of large rocks in a circular alignment. These cairns are presumed to be of historic age, based on the presence of twentieth century artifacts found nearby. The historic component overlies a prehistoric lithic scatter. The depth of cultural deposits is estimated to be less than 10 centimeters based on the shallow gravelly soils across the site.

Artifacts: Artifacts observed at the site include chipped stone debitage, glass fragments, and tin cans.

Significance: Site 41PS1026 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: Although site 41PS1026 is bisected by the Panhandle Trail, the rock cairns on the site are not readily visible. Furthermore, there are no additional cultural features or time-diagnostic artifacts to draw the attention of trail users. No further work is recommended.

***41PS1027 (Spring #3)***

Site Type: Site 41PS1027 is a lithic scatter of unknown prehistoric age, and a twentieth century or modern campsite.

Site Area: The site measures approximately 170 meters east-west by 120 meters north-south, encompassing a total area of five acres.

Landform: The site is located on a relatively level landform adjacent to a spring along a tributary to Alamo Creek.

Soil Type: Site 41PS1027 is located in an area of soils identified by the USDA Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,320 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. The area near the spring contains thick riparian vegetation, as well as a few large mesquite trees. Surface visibility ranged from about 60 to 90 percent.

Disturbances: Site 41PS1027 has been impacted by animal trampling, and erosion, particularly on the north terrace. The site is estimated to be approximately 30 percent intact.

Previous Investigations: None

Present Investigation: Site 41PS1027 was recorded in 2006. A recent historic or modern campfire ring was the only feature recorded. The depth of cultural deposits is estimated to be less than 10 centimeters, based on the severely deflated desert pavement which makes up most of the site area.

Artifacts: The few artifacts identified at the site include chipped stone debitage, cores, and a few burned rocks.

Significance: Site 41PS1027 is estimated to be 30 percent intact with moderately low research potential. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: This site is located about 30 meters southeast of the Panhandle Trail and does not include any prehistoric cultural features and only a sparse amount of cultural material. No further work is recommended.

***41PS1028 (Spring #1)***

Site Type: Site 41PS1028 is an Archaic open campsite, and a nineteenth century artifact scatter.

Site Area: The site measures approximately 410 meters east-west by 250 meters north-south, encompassing a total area of 25.3 acres.

Landform: The site is located in a relatively level area north of Alamo Creek, stretching from the creek to a spring located approximately 240 meters north.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as 80 percent Redford and Corazones soils, 10 to 30 percent slopes, and 20 percent Altar-Bodecker-Riverwash complex, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site ranges from 3,260 to 3,280 feet AMSL.

Vegetation: Vegetation at site 41PS1028 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, mesquite, and bunch grasses. The area around the spring is thickly vegetated with grasses, scrub brush, and a few large mesquite trees. The site area beyond the spring is more sparsely vegetated. Surface visibility ranged from 60 to 80 percent.

Disturbances: Site 41PS1028 has been impacted by erosion, animal burrowing and trampling, construction of a former ranch road, and other bulldozing. The site is estimated to be approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1028 was recorded in 2006. Cultural features consist of two prehistoric burned rock scatters and a historic artifact scatter. One burned rock scatter measures approximately 16 meters by 9 meters; the other measures 5 meters by 4 meters. The historic artifact scatter measures about 16 meters in diameter. The depth of cultural deposits is estimated to be 20 centimeters based on cutbank profiles.

Artifacts: Prehistoric artifacts identified at the site include one untyped dart point fragment (collected), bifaces, scrapers, cores, debitage, burned rocks, and two chipped-stone choppers. The historic artifact scatter includes 75 green tin-lead glazed Mexican earthenware sherds; seven coarse, slipped Mexican earthenware sherds; six white earthenware sherds with blue annular decoration; one handpainted white earthenware sherd; 12 undecorated white earthenware sherds; three amber glass fragments (one base and two body fragments); one clear glass base fragment; one olive green glass fragment; a cast iron Dutch oven foot; a tin can; and a soldered hole-in-top lid. All of the historic artifacts were collected from the site for curation.

Significance: Site 41PS1028 is considered to have moderate research potential, and was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: This site is bisected by the Panhandle Trail, and the spring could draw the attention of trail users. As a result, this site should be monitored on at least a quarterly basis or as warranted by visitation to this part of BBRSP. Time-diagnostic artifacts should be collected from the site for curation, when encountered. In addition, further archival research should be conducted to determine the nature of the historic occupation of 41PS1028.

***41PS1029 (Rock Knoll)***

Site Type: Site 41PS1029 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 100 meters north-south by 80 meters east-west, encompassing a total area of two acres.

Landform: The Rock Knoll site is located on an isolated knoll east of the Panhandle Trail. The surrounding area is relatively flat.

Soil Type: The site is located within an area identified by the USDA Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,320 to 3,340 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, and bunch grasses. Surface visibility is approximately 80 percent.

Disturbances: The site has been impacted by sheet wash erosion and is estimated to be only about 30 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1029 was recorded in 2006. No cultural features were observed. The depth of cultural deposits is estimated to be less than 10 centimeters based on the eroded, gravelly surface of the knoll upon which the site is situated.

Artifacts: Artifacts identified at the site include chipped stone debitage, cores, and bifaces.

Significance: The Rock Knoll site has low research potential and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The Panhandle Trail borders the western edge of 41PS1029, but there are no cultural features or time-diagnostic artifacts to draw the attention of trail users. No further work is recommended.

***41PS1030***

Site Type: Site 41PS1030 is a Late Archaic and possible Late Prehistoric open campsite, and two rockshelter habitations.

Site Area: The site measures approximately 90 meters east-west by 70 meters north-south, encompassing a total area of 1.6 acres.

Landform: The site is located on a relatively level upland ridge which slopes downward to the south. The rockshelters are located below the campsite overlooking headwater drainages to the south.

Soil Type: Site 41PS1030 is located within an area of soils identified by the USDA Natural Resources Conservation Service as Manzanillo and Paisano soils, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,560 to 3,610 feet AMSL.

Vegetation: Vegetation in the site area is typical Chihuahuan Desert scrub, including sparse creosotebush, prickly pear, sotol, and bunch grasses. Surface visibility is approximately 90 percent.

Disturbances: Site 41PS1030 has been impacted by erosion and animal trampling, and is estimated to be about 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1030 was recorded in 2007. Features consist of a possible Late Prehistoric Cielo complex habitation structure, a rock alignment, and two rockshelters

with talus deposits. The Cielo structure consists of two parallel stacked rock alignments two courses high, roughly 2 meters long and 1 meter apart. Structures such as this, though uncommon, have been found at other Cielo sites. Additionally, an L-shaped rock alignment and several metates were found across the site. The rockshelters were discovered down slope from the open campsite. The shelters measure 12.7 meters long by 4.3 meters wide by 1.1 meters high and 2.8 meters long by 2.8 meters wide by 0.5 meter high, with talus deposits containing chipped stone debitage, lithic tools, and burned rock. The depth of cultural deposits is estimated to be 15 centimeters based on the apparent depth of the rockshelter deposits.

Artifacts: Artifacts identified at the site include chipped stone debitage, bifaces, cores, three metates, and burned rocks. In addition, one Late Archaic Ensor dart point and one untyped dart point fragment were recovered for curation.

Significance: Site 41PS1030 is considered to have moderately high research potential, and was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: Though 41PS1030 is not located on the Panhandle Trail, one of the rockshelters at this site is readily visible from the trail. As a result, this site should be monitored on at least a quarterly basis or as warranted by the level of visitation to this part of BBRSP.

***41PS1031***

Site Type: Site 41PS1031 is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures approximately 50 meters east-west by 30 meters north-south, encompassing a total area of 0.37 acre.

Landform: The site is located on a knoll 25 meters west of the Panhandle Trail. The knoll is heavily eroded and covered with large pebbles and sparse vegetation.

Soil Type: The site is located within an area of soils identified by the USDA Natural Resources Conservation Service as Manzanillo and Paisano soils, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,570 feet AMSL.

Vegetation: Vegetation in the site area is sparse and includes typical Chihuahuan Desert scrub such as creosotebush, ocotillo, and various opuntias. Surface visibility is approximately 90 percent.

Disturbances: Site 41PS1031 has been heavily impacted by erosion, and is estimated to be about 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1031 was recorded in 2007. Two lithic concentrations were noted during the survey, but were not recorded as features. The lithic concentrations contain a variety of materials and do not appear to represent single knapping episodes. It is likely they have been exposed and concentrated by erosion. Cultural deposits appear to be surficial.

Artifacts: Artifacts identified at this site include one early stage biface, cores, and debitage. The debitage is mostly large, corticate specimens, suggesting the site was a lithic procurement area. No time-diagnostic artifacts were identified.

Significance: Site 41PS1031 has low research potential, and is not recommended for designation as a State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS1032***

Site Type: Site 41PS1032 is a rockshelter habitation site of unknown prehistoric age.

Site Area: The site measures approximately 20 meters north/northeast–south/southwest by 15 meters northwest-southeast, encompassing a total area of 0.08 acre.

Landform: Site 41PS1032 is located on an eastern facing slope overlooking a tributary of Alamito Creek, which is located 120 meters to the east.

Soil Type: The USDA Natural Resources Conservation Service has mapped soils in the vicinity of 41PS1032 as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,430 to 3,450 feet AMSL.

Vegetation: Vegetation in the site area is typical Chihuahuan Desert scrub, including sparse creosotebush, catclaw acacia, prickly pear, and bunch grasses. Surface visibility is approximately 90 percent.

Disturbances: Site 41PS1032 has been impacted by spalling from the rock overhang and is estimated to be about 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1032 was recorded in 2007. Investigators recorded a rockshelter and talus deposit. The rockshelter is approximately seven meters wide, by seven meters tall, by five meters deep, with an associated talus deposit measuring 12 meters by 12 meters. The depth of cultural deposits within the shelter is estimated to be approximately 20 centimeters

Artifacts: Most artifacts at this site were observed on the talus and include burned rocks, debitage, and a metate. Artifacts found within the shelter include several likely metates, a pop-top soft drink can, and fragments of a patinated clear glass bottle. The bottle dates to the early twentieth century.

Significance: Site 41PS1032 has moderately high research potential, and was officially designated as a State Archeological Landmark on October 31, 2008.

Recommendations: This site is located about 25 meters from the Panhandle Trail and will be visible to trail users. As a result, this site should be monitored at least quarterly or as warranted by the level of visitation to this area of BBRSP. Any diagnostic artifacts observed during monitoring should be mapped and recovered from the site for curation.

***41PS1033***

Site Type: Site 41PS1033 is a rockshelter habitation site of unknown prehistoric age.

Site Area: The site measures approximately 20 meters north-south by 15 meters east-west, encompassing a total area of 0.08 acre.

Landform: Site 41PS1033 is located on an east facing slope overlooking a tributary to Alamito Creek, about 120 meters to the east.

Soil Type: Site 41PS1033 is located within an area of soils identified by the Natural Resources Conservation Service as 50 percent Manzanillo and Paisano soils, 1 to 30 percent slopes and 50 percent Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,460 to 3,480 feet AMSL.

Vegetation: Vegetation in the vicinity of the site is typical Chihuahuan Desert scrub, includ-

ing sparse creosotebush, catclaw acacia, prickly pear, and bunch grasses. Surface visibility is approximately 90 percent.

Disturbances: Site 41PS1033 has been impacted by spalling of the shelter roof and is estimated to be 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1033 was recorded in 2007. Features identified include the rockshelter with four alcoves and an associated talus deposit. The rockshelter is approximately 16 meters wide by 2 meters tall by 3 meters deep, with a talus measuring 12 meters by 9 meters. The depth of cultural deposits within the shelter is estimated to be about 15 centimeters.

Artifacts: Most artifacts at this site were observed on the talus and include chipped stone cores, debitage, and burned rocks.

Significance: Site 41PS1033 is estimated to be approximately 70 percent intact, with moderately high research potential. The site was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: The rock outcrop with the rockshelter at 41PS1033 is visible from the Panhandle Trail, but the shelter itself is somewhat obscured from view. This site should be monitored at least biannually or as warranted by the level of visitation to this area of BBRSP. Any diagnostic artifacts found during monitoring should be mapped and then recovered from the site for curation.

***41PS1034***

Site Type: Site 41PS1034 is a rockshelter habitation site of unknown prehistoric age.

Site Area: The site measures approximately 15 meters north/northeast–south/southwest by 10 meters northwest-southeast, encompassing a total area of 0.04 acre.

Landform: Site 41PS1034 is located on an east facing slope overlooking an Alamito Creek tributary 200 meters to the east.

Soil Type: The site is located within an area of soils identified by the Natural Resources Conservation Service as 70 percent Manzanillo and Paisano soils, 1 to 30 percent slopes and 30 percent Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,480 feet AMSL.

Vegetation: Vegetation in the area of 41PS1034 is typical Chihuahuan Desert scrub, including sparse creosotebush, prickly pear, sotol, and bunch grasses. Surface visibility is about 85 percent.

Disturbances: Site 41PS1034 has been impacted by erosion and animal trampling, and is estimated to be 75 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1034 was recorded in 2007. Features identified include the rockshelter and talus deposit. The rockshelter is approximately 13 meters wide by 2 meters tall by 3 meters deep, with a 13 by 8 meter talus. The depth of cultural deposits within the shelter is estimated to be approximately 30 centimeters.

Artifacts: Most artifacts at this site were observed on the talus and include chipped stone debitage and burned rocks.

Significance: Site 41PS1034 has moderately high research potential, and was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: The rock outcrop within which the rockshelter at 41PS1034 is located is visible from the Panhandle Trail, but the shelter itself is somewhat obscured from view. This site should be monitored at least biannually or as warranted by the level of visitation to this area of BBRSP. Any diagnostic artifacts observed during monitoring should be mapped and then recovered from the site for curation.

***41PS1035***

Site Type: Site 41PS1035 is a rockshelter habitation site of unknown prehistoric age.

Site Area: The rockshelter at this site measures approximately 3 meters north-south by 2 meters east-west, encompassing a total area of 0.001 acre.

Landform: The site is situated on an east facing slope overlooking a tributary to Alamito Creek 200 meters to the east.

Soil Type: Soils in the vicinity of 41PS1035 have been identified as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,480 feet AMSL.

Vegetation: Vegetation is typical Chihuahuan Desert scrub, including sparse creosotebush, prickly pear, sotol, and bunch grasses. Surface visibility is about 85 percent.

Disturbances: Site 41PS1035 has been impacted by spalling of the rockshelter roof and is estimated to be 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1035 was recorded in 2007. The site includes a small rockshelter with no associated talus deposits. No additional features were observed. The rockshelter measures approximately 3.1 meters wide by 1.2 meters tall by 2.2 meters deep. The depth of cultural deposits within the shelter is estimated to be approximately 5 centimeters.

Artifacts: Approximately 12 pieces of chipped stone debitage were observed on the floor of the shelter.

Significance: Because there is some limited potential for 41PS1035 to contain buried archeological deposits, the site is considered to have moderate research potential. However, the site does not appear to meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1035.

***41PS1036***

Site Type: Site 41PS1036 is an open campsite of unknown prehistoric age.

Site Area: The site measures approximately 50 meters north/northwest–south/southeast by 20 meters east-west, encompassing a total area of 0.25 acre.

Landform: The site is located on a low terrace on the west side of a tributary to Alamito Creek. Rock outcrops containing several rockshelters are located above the site on both sides of the drainage.

Soil Type: Soils within the site area have been mapped by the USDA Natural Resources Conservation Service as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of 41PS1036 is approximately 3,360 feet AMSL.

Vegetation: Vegetation at 41PS1036 is typical Chihuahuan Desert scrub, including creo-

sotebush, prickly pear, sotol, and bunch grasses. Surface visibility is about 70 percent.

Disturbances: This site has been impacted by severe erosion resulting from the drainage that extends across the low terrace upon which 41PS1036 is situated. The site is estimated to be only 30 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1036 was recorded in 2007. The site is covered with a relatively dense scatter of burned rock, likely representing multiple hearths that have been displaced by flooding. A single identifiable hearth (2.5 meters by 1.5 meters) was recorded. The depth of cultural deposits is estimated to be up to 30 centimeters in isolated areas, as a result of soil accumulation around the base of vegetation.

Artifacts: Artifacts identified at the site include chipped stone debitage and burned rocks.

Significance: Site 41PS1036 has low research potential, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1036.

***41PS1037***

Site Type: Site 41PS1037 is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures approximately 50 meters north-south by 20 meters east-west, encompassing a total area of 0.25 acre.

Landform: Site 41PS1037 is located on a mid-elevation, south-trending ridgetop, roughly 400 meters north of Alamito Creek. The ridge is covered in surface gravels, many of which are suitable for manufacturing stone tools.

Soil Type: Soils within the site area have been identified by the USDA Natural Resources Conservation Service as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1037 is approximately 3,350 feet AMSL.

Vegetation: Vegetation within the site area is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, sotol, and bunch grasses. Surface visibility is about 80 percent.

Disturbances: Site 41PS1037 has been impacted by erosion and is estimated to be approximately 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1037 was recorded in 2007. No cultural features were identified, and deposits are surficial.

Artifacts: Artifacts identified at the site include an abundance of chipped stone debitage, bifaces, and cores. Debitage consists mostly of large flakes, many with cortex. No time-diagnostic artifacts were observed.

Significance: Site 41PS1037 has moderate research potential and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1038***

Site Type: Site 41PS1038 is a twentieth century ranchstead and lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 450 meters east-west by 80 meters north-south, encompassing a total area of 8.91 acres.

Landform: Site 41PS1038 is bounded by the Panhandle Trail to the north and a railroad easement fence line to the south. Alamito Creek is located approximately 200 meters to the south.

Soil Type: The site is located within an area of soils identified as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of 41PS1038 is approximately 3,320 feet AMSL.

Vegetation: Vegetation within the site area is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is about 80 percent.

Disturbances: Site 41PS1038 has been impacted by erosion and is estimated to be 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1038 was recorded in 2007. Features identified at the site include a rock cairn two courses tall, a tin can dump measuring 17 by 7 meters, a concrete slab measuring 3.4 by 3 meters, and three wooden fence posts. The depth of cultural deposits is estimated to be approximately 15 centimeters.

Artifacts: Historic artifacts identified at the site include hole-in-top cans, rolled seam cans, tobacco cans, lard cans, sardine cans, cone-top beer cans, iron chains, iron pipes, galvanized sheet metal, barbed wire, bullet casings, glass bottle fragments, and ceramics including whiteware and porcelain. In addition, chipped stone bifaces, cores, and debitage were observed across the site.

Significance: Site 41PS1038 has low research potential and is not recommended for designation as a State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1039 (Casa Ramon Homestead)***

Site Type: Site 41PS1039 is the Casa Ramon homestead, purchased by Ramon Aguirre in 1909, and a prehistoric lithic scatter of unknown age.

Site Area: The site measures approximately 230 meters northeast-southwest by 110 meters northwest-southeast, encompassing a total area of 6.26 acres.

Landform: The site is located on a relatively level area between two south trending tributaries to Alamito Creek.

Soil Type: Site 41PS1039 is located within an area of soils identified by the USDA Natural Resources Conservation Service as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of this site is approximately 3,340 feet AMSL.

Vegetation: Vegetation at 41PS1039 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is approximately 70 percent.

Disturbances: This site has been impacted by erosion, animal burrowing and trampling, deterioration of structures, and graffiti. The site is estimated to be 70 percent intact.

Previous Investigations: Casa Ramon was renovated in 1982 and purchased by Texas Parks and Wildlife as part of BBRSP in 1988. The site was reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brew-

ster Counties, Texas, 1988–1994 (Ing et al. 1996:189–190) but was not officially recorded until the 2007 Panhandle Trail survey.

Present Investigation: Casa Ramon, site 41PS1039, was formally recorded in 2007. The site includes a small house, privy, trash burning bin, foundation, two earthen water tanks, fences, and a corral. The house measures approximately 4 by 5.5 meters, with a fenced yard and fenced garden, and was probably built around 1909 when the tract was purchased. The corral is made of wire and posts and measures about 6 by 7 meters. The present privy may date to the 1982 renovations. The vegetation around the homestead was degraded and the soils deflated due to livestock grazing, therefore soils in the area are likely to be less than 30 centimeters thick.

Artifacts: Artifacts observed at 41PS1039 include rolled-seam cans, lard cans, sardine cans, cone-top beer cans, metal film canisters, railroad spikes, wire nails, bailing wire, metal buckle, bolts, metal wash tub, gas stove, cast iron pan, brown bottle glass, green bottle glass, aqua bottle glass, clear bottle glass, solarized purple bottle glass, clear window glass, green opalescent glass, whiteware, stoneware, yellow ware, molded whiteware, yellow, white, and black enamel ware, green glazed Fiesta ware, porcelain, earthenware, red and white agate marble, and wooden fence posts. Some chipped stone debitage was also observed at the site.

Significance: Site 41PS1039 is a ranchstead dating to the twentieth century and a prehistoric lithic scatter dating to an unknown time period. The historic component of this site is estimated to have moderate research potential, while the prehistoric component has low research potential. The site is not recommended for designation as an official State Antiquities Landmark.

Recommendations: Because of its visibility from the Panhandle Trail, the condition of Casa Ramon should be monitored at least biannually or as warranted by the level of visitation to this area of BBRSP.

***41PS1040***

Site Type: Site 41PS1040 is a lithic scatter of unknown prehistoric age and a twentieth century debris scatter.

Site Area: The site measures approximately 50 meters north-south by 40 meters east-west, encompassing a total area of 0.49 acre.

Landform: The site is located on a low knoll immediately south of the Panhandle Trail. Southwest trending tributaries are located roughly 200 meters north and south of the site.

Soil Type: Soils within the site area have been identified by the USDA Natural Resources Conservation Service as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1040 is approximately 3,360 feet AMSL.

Vegetation: Vegetation at the site area is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, and bunch grasses. Surface visibility is 75 percent.

Disturbances: Site 41PS1040 has been impacted by erosion, animal burrowing and trampling, and the construction of a former ranch road. The site is estimated to be about 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1040 was recorded in 2007. No cultural features were observed. The depth of cultural deposits is estimated to be less than 10 centimeters based on the location of the site on a gravel pediment.

Artifacts: Artifacts identified at the site include chipped stone debitage, bifaces, hole-in-top cans, brown bottle glass, and a muleshoe.

Significance: Site 41PS1040 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1041***

Site Type: Site 41PS1041 is a lithic scatter of unknown prehistoric age and a nineteenth century debris scatter.

Site Area: The site measures approximately 540 meters northeast-southwest by 180 meters southeast–northwest, encompassing a total area of 24 acres.

Landform: The site is situated on an upland knoll, backslope, and footslope.

Soil Type: Soils within the site area have been identified as Redford and Corazones soils, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,370 to 3,410 feet AMSL.

Vegetation: Vegetation at 41PS1041 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 75 percent.

Disturbances: The site has been impacted by erosion, animal trampling and burrowing, and the construction of a former ranch road. The site is estimated to be 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1041 was recorded in 2007. A rock cairn was recorded, representing a 3,410 feet AMSL benchmark on top of the knoll in the site area. A lithic scatter was also identified on top of the knoll and extending down the west flank. A scatter of nineteenth century artifacts was found at the far southwest end of the site. The depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: Prehistoric artifacts identified at the site include chipped stone debitage, bifaces, and cores. The historic artifacts include one Mexican earthenware rimsherd with blue and brown annular decoration around the rim, four Mexican earthenware sherds with interior and exterior buff slip, and a rimmed Frankford Arsenal Colt-Schofield .45 caliber cartridge (type 1875) without a headstamp. The cartridge and ceramic sherds were collected for curation. A muleshoe and a roll-top can were noted.

Significance: Site 41PS1041 has a moderately low research potential, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1042***

Site Type: Site 41PS1042 is an open campsite, likely of Late Prehistoric age, and a twentieth century artifact concentration.

Site Area: The site measures approximately 260 meters east-west by 100 meters north-south, encompassing a total area of 6.42 acres.

Landform: The site is situated on a silt terrace north of Cienega Creek, and is bounded by deep arroyos.

Soil Type: Site 41PS1042 is located within an area of soils identified by the NRCS as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of the site ranges from 3,310 to 3,322 feet AMSL.

Vegetation: Vegetation at 41PS1042 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, and catclaw acacia. Surface visibility is 90 percent.

Disturbances: The site has been impacted by a former ranch road, erosion, and possible plowing. The site is estimated to be 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1042 was recorded in 2007. Both prehistoric and historic features were identified, and consist of 16 burned rock scatters that probably represent many hearths that have been displaced by flooding and erosion, a rock cairn benchmark dating to 1943, a more recent hearth located within the confines of a tire, a rock alignment, and a concentration of tin cans. The depth of cultural deposits is estimated to be 35 centimeters based on inspection of erosional cutbanks.

Artifacts: Artifacts recovered from this site include a prehistoric mollusk shell bead and a red and black Chihuahuan pottery sherd of unknown type. Additional prehistoric artifacts observed at 41PS1042 include chipped stone debitage, bifaces, and cores. Historic artifacts noted include vessel glass, hole-in-top cans, a Remington UMC 17 cartridge, and whiteware ceramics.

Significance: Site 41PS1042 has moderate research potential. The site was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: Due to the visibility of the cultural features and artifacts at 41PS1042 from the Panhandle Trail, this site should be monitored on at least a quarterly basis.

***41PS1043***

Site Type: Site 41PS1043 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 60 meters north-south by 60 meters east-west, encompassing a total area of 0.89 acre.

Landform: The site is located on a narrow ridge between two south–trending tributaries to Alamito Creek. Cat Spring is located approximately 150 meters to the west.

Soil Type: Soils within the site area have been identified by the NRCS as Manzanillo and Paisano soils, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1043 is approximately 3,600 feet AMSL.

Vegetation: Vegetation on the site is typical Chihuahuan Desert scrub, including, creosotebush, prickly pear, and Torrey yucca. Surface visibility is 90 percent.

Disturbances: Site 41PS1043 has been impacted by a former ranch road, possible bulldozing, and erosion. The site is estimated to be 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1043 was recorded in 2007. No cultural features were identified. The depth of deposits is estimated to be less than 10 centimeters.

Artifacts: Artifacts identified at the site include chipped stone debitage, bifaces, scrapers, cores, and a single metate.

Significance: Site 41PS1043 has low research potential, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1044 (Rancho Chupadero)***

Site Type: Site 41PS1044 is a Late Archaic lithic scatter and a nineteenth to twentieth century ranchstead.

Site Area: The site measures approximately 150 meters east-west by 140 meters north/northeast-south/southwest, encompassing a total area of 5.18 acres.

Landform: The site is located at Chupadero Spring, just west of an unnamed tributary to Alamito Creek, and approximately 170 meters west of Cat Spring.

Soil Type: Site 41PS1044 is located within an area of soils identified as Manzanillo and Paisano soils, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,640 to 3,680 feet AMSL.

Vegetation: Vegetation at the site is dense and includes creosotebush, prickly pear, catclaw acacia, sotol, Torrey yucca, mesquite, and two large cottonwood trees. Surface visibility is 60 percent.

Disturbances: Site 41PS1044 has been impacted by a former ranch road, extensive bulldozing, minor erosion, animal burrowing and trampling, and deterioration of the adobe structure. Additionally, the site shows evidence of recent visitation such as charcoal, sardine cans, and tent stakes. The site is estimated to be 30 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1044 was recorded in 2007. Features include an adobe ruin, concrete water tank, barbed wire and smooth wire fences, a rock dam, and livestock pens. The depth of cultural deposits is estimated to be 20 centimeters based on the depth of animal burrows across the site.

Artifacts: Both historic and prehistoric artifacts were observed at the site. Prehistoric artifacts include a Late Archaic Palmillas dart point (Form 1), bifaces, debitage, cores, and burned rocks. Historic artifacts identified at the site include two lead-glazed earthenware sherds, one undecorated whiteware sherd with a Knowles, Taylor & Knowles maker's mark (this sherd dates to about 1900) (Debolt 1995:72), four sherds with flow blue transferware decoration, one Galera lead-glazed sherd, a glazed conduit pipe fragment, glass fragments (milk glass, pink and green depression ware, clear, solarized purple, aqua, cobalt, and brown), wood (palette, roof beam, and sawn boards), and metal (aluminum pot lid, lard bucket, angle iron, strap metal, rolled-seam cans, cast iron stove parts, oil drum, hole-in-top can, barbed wire, wire fence mesh, and wire nails). The dart point and eight historic ceramic sherds were recovered for curation.

Significance: Rancho Chupadero, site 41PS1044, has moderately low research potential and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1045***

Site Type: Site 41PS1045 is a lithic scatter of unknown prehistoric age.

Site Area: At its widest points, the site measures approximately 60 meters north/northwest-south/southeast by 50 meters east-west, encompassing a total area of 0.64 acre.

Landform: The site is located on a relatively level landform west of a tributary to Cienega Creek and east of the Panhandle Trail.

Soil Type: Site 41PS1045 is located within an area of soils identified as Manzanillo and Paisano soils, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is roughly 3,760 feet AMSL.

Vegetation: Vegetation on the site is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 80 percent.

Disturbances: Site 41PS1045 has been impacted by a gravel road, animal burrowing and trampling, bulldozing, and erosion. The site is estimated to be 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1045 was recorded in 2007. No cultural features were observed. The depth of cultural deposits is estimated to be 10 centimeters.

Artifacts: Artifacts identified at the site include chipped stone debitage, bifaces, and a single pull-tab can.

Significance: Site 41PS1045 has low research potential, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1046***

Site Type: Site 41PS1046 is an Early Archaic open campsite.

Site Area: The site measures approximately 50 meters northwest-southeast by 20 meters northeast-southwest, encompassing a total area of 0.25 acre.

Landform: The site is located on a rocky hilltop approximately 150 meters southwest of the Panhandle Trail.

Soil Type: Soils in the area of 41PS1046 have been identified by the NRCS as Horsetrap-Bofecillos-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,760 feet AMSL.

Vegetation: Vegetation at 41PS1046 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 80 percent.

Disturbances: The site has been impacted by animal burrowing and trampling, and is estimated to be 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1046 was recorded in 2007. The only cultural feature identified is a burned rock scatter measuring approximately 28 meters northwest-southeast by 10 meters northeast-southwest. The depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: Artifacts identified at the site include two Early Archaic Pandale dart point fragments, one untyped Archaic dart point, bifaces, cores, debitage, and a metate. The dart points were recovered for curation.

Significance: Site 41PS1046 has low research potential, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1047***

Site Type: Site 41PS1047 is a lithic procurement site of unknown prehistoric age and a historic fence.

Site Area: The site measures approximately 40 meters north-south by 150 meters east/southeast-west/northwest, encompassing a total area of 1.48 acres.

Landform: Site 41PS1047 is located on an eroded upland knoll west of the Panhandle Trail.

Soil Type: The site is located within an area of soils identified by the NRCS as Manzanillo and Paisano soils, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1047 ranges from 3,980 to 4,020 feet AMSL.

Vegetation: Vegetation in the site area is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 80 percent.

Disturbances: Site 41PS1047 has been impacted by erosion and animal burrowing and trampling. The site is estimated to be about 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1047 was recorded in 2007. The only cultural features identified were three historic rock cairns, presumably used to support fence posts. Four wooden posts were also observed at the site. The cultural deposits are estimated to be surficial.

Artifacts: Artifacts identified at the site include chipped stone debitage, bifaces, and cores, all of which were manufactured from poor quality material

Significance: Site 41PS1047 has low research potential, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1048***

Site Type: Site 41PS1048 is a Late Archaic open campsite.

Site Area: The site measures approximately 180 meters north/northeast–south/southwest by 60 meters east-west, encompassing a total area of 2.67 acres.

Landform: The site is located on an eroded upland landform.

Soil Type: Site 41PS1048 is located within an area identified as Lingua very gravelly loam, 1 to 8 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,960 feet AMSL.

Vegetation: Vegetation at 41PS1048 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 85 percent.

Disturbances: This site has been impacted by a former ranch road, animal burrowing and trampling, and erosion. The site is estimated to be about 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1048 was recorded in 2007. Two hearths were identified, one of which had been dispersed. The site sits on a highly eroded landform with common surface gravels, suggesting that cultural deposits are surficial.

Artifacts: Artifacts identified at this site include a Late Archaic expanding stem dart point (untyped) that was recovered for curation, and a diffuse scatter of debitage. Additionally, a few modern cans and cartridges were observed.

Significance: Site 41PS1048 has low research potential, and is not recommended for des-

ignation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1049***

Site Type: Site 41PS1049 is an open campsite that may include an Early Paleoindian component.

Site Area: The site measures approximately 200 meters north/northeast–south/southwest by 130 meters east-west, encompassing a total area of 6.43 acres.

Landform: The site is situated on a mostly level plain, approximately 300 meters south of Mad Dog Butte and just north of a tributary to Cienega Creek.

Soil Type: Site 41PS1049 is located within an area of soils identified as Lingua very gravelly loam, 1 to 8 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,980 to 4,000 feet AMSL.

Vegetation: Vegetation at 41PS1049 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 80 percent.

Disturbances: The site has been impacted by a former ranch road, bulldozing, animal burrowing and trampling, and erosion. The site is estimated to be 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1049 was recorded in 2007. The only cultural feature identified is a burned rock scatter that measures approximately 15 meters in diameter. The depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: Artifacts identified at the site include an Early Paleoindian Folsom point base (recovered for curation), cores, debitage, and burned rocks. The Folsom point base was produced from brown chert, similar to material found at nearby lithic procurement site 41PS572.

Significance: Site 41PS1049 has moderate research potential, and was designated as an official State Archeological Landmark on October 31, 2008.

Recommendations: Given that one of the few Early Paleoindian points in the park was recovered from this site, 41PS1049 should be monitored on at least a quarterly schedule. All temporally diagnostic artifacts observed on the site should be mapped in place and then collected for curation.

***41PS1050***

Site Type: Site 41PS1050 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 170 meters north-south by 110 meters east-west, encompassing a total area of 4.62 acres.

Landform: The site is located on a saddle between Mad Dog Butte to the west and other buttes to the east.

Soil Type: Site 41PS1050 is located within an area of soils identified by the NRCS as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 4,000 to 4,080 feet AMSL.

Vegetation: Vegetation at 41PS1050 is typical Chihuahuan Desert scrub including sparse creosotebush, prickly pear, and sotol. Surface visibility is 80 percent.

Disturbances: This site has been impacted by a former ranch road and erosion. The site is estimated to be about 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1050 was recorded in 2007. Investigators recorded a rock cairn, presumably prehistoric, and a lithic concentration. Based on the site's location on an erosional landform, the depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: Artifacts identified at the site include chipped stone debitage, bifaces, scrapers, and manos.

Significance: Site 41PS1050 has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

***41PS1051***

Site Type: Site 41PS1051 is a Middle Archaic, Late Archaic, and Late Prehistoric lithic scatter.

Site Area: The site measures approximately 530 meters northeast-southwest by 250 meters northwest-southeast, encompassing a total area of 32.74 acres.

Landform: The site is located on a low ridge between two drainages, north of Mad Dog Butte.

Soil Type: The NRCS has mapped soils in the 41PS1051 site area as Lingua very gravelly loam, 1 to 8 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 4,000 feet AMSL.

Vegetation: Vegetation at 41PS1051 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, ocotillo, and bunch grasses. Surface visibility is 70 percent.

Disturbances: Site 41PS1051 has been impacted by animal burrowing and trampling, a former ranch road, and erosion. The site is estimated to be 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1051 was recorded in 2007. Features identified include five bedrock mortars. The depth of cultural deposits is estimated to be up to 20 centimeters in a few areas with soil accumulation. But, for the most part, the site is surficial.

Artifacts: Artifacts identified at the site include seven dart points, one arrow point, bifaces, scrapers, other chipped stone tools, cores, debitage, manos, metates, burned rocks, a worked mollusk shell bead (collected), and a pestle fragment. The projectile points were all collected and are identified as one Middle Archaic Jora dart point, one Middle Archaic Gobernadora dart point, one Middle Archaic Langtry dart point, two Late Archaic Paisano dart point fragments, one Late Archaic Figueroa dart point, one untyped Archaic dart point, one untyped Late Prehistoric arrow point fragment. In addition, a bottle cap embossed with "XXX BREWING ASS'N SAN ANTONIO TEX" was also removed from the site for curation. This cap dates from 1883 to 1918.

Significance: Site 41PS1051 has moderate research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended.

## 2008 FIELD SEASON

### Nopalera Trail

The Nopalera Trail is a multi-use trail that follows an existing unimproved two-track road approximately eight feet wide, and extends westward approximately 3.9 miles from the Las Burras Road to the proposed Auras Cut-Off Trail, in the central part of BBRSP (Figure 18).

The TPWD Archeology Survey Team conducted the archeological survey of the Nopalera Trail February 6 - 8, 2008. The actual area surveyed during this investigation totaled 234 acres. A total of six previously unrecorded archeological sites and six isolated finds were recorded within this survey corridor. The archeological sites are 41PS1053–41PS1057, and 41PS1062. Site descriptions are below; site summary data are in Appendix A. Isolated finds are described in Appendix C.

***41PS1053***

Site Type: Site 41PS1053 is a Late Archaic lithic scatter, and twentieth century ranching complex.

Site Area: The site measures 230 m north-south by 130 m east-west, encompassing an area of 7.40 acres.

Landform: The site is situated between a Las Burras Canyon header and an Auras Canyon header.

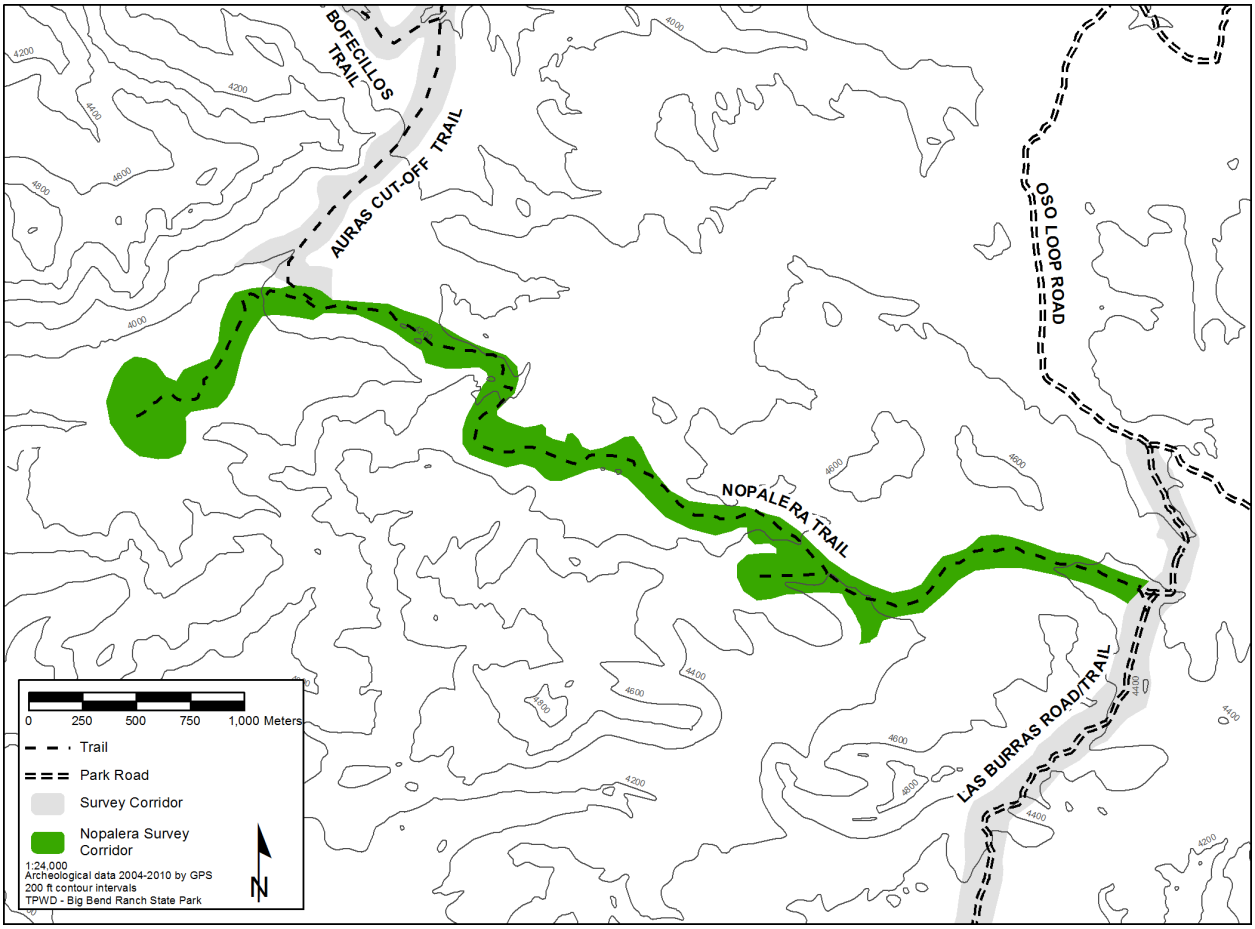


**Figure 18.** Map showing location of Nopalera Trail.

Soil Type: Soils at 41PS1053 have been identified by the Natural Resource Conservation Service as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of the site is 4,400 feet AMSL.

Vegetation: Vegetation at 41PS1053 is sparse and consists of typical Chihuahuan Desert scrub, including creosote, prickly pear, ocotillo, and bunch grasses. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, and the previous construction of an undeveloped ranch road through the area. Site 41PS1053 is estimated to be only 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1053 was recorded in 2008. A prehistoric lithic concentration, measuring 36 by 37 meters, was identified in the south central area of the site. Prehistoric artifacts were also observed across the remainder of the site, but these deposits are relatively thin in the northern reaches of the site. Several historic cultural features and artifacts associated with the watering and feeding of livestock were also noted on the site, primarily in the northern portion of 41PS1053. These features include a stock tank (3.88 meter across by 75 centimeters tall), a feed trough (1.2 by 1.2 meters and 27 centimeters deep) with four compartments and a steel barrel auto feeder, a concrete water trough with wood planks that cover the control intake pipe, two wooden fence posts (2 meters lengths), and a historic artifact concentration. Due to the absence of depositional soils on this site, the maximum depth of cultural deposits is estimated to be no more than 10 centimeters.

Artifacts: The prehistoric lithic concentration at this site consists of chipped stone debitage, bifaces, scrapers, and metates, and a Late Archaic Figueroa dart point fragment. The dart point was recovered for curation. Historic artifacts observed include green and clear bottle glass fragments, rolled seam tin cans, wire nails, two center fire W-W .45 Colt cartridges, a baking pan, and an asbestos tile.

Significance: Site 41PS1053 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1053.

***41PS1054***

Site Type: Site 41PS1054 is a twentieth century ranching complex.

Site Area: The site measures 90 meters north-south by 150 meters east-west, encompassing an area of 3.33 acres.

Landform: The site is located along a headwater drainage to Auras Canyon. The drainage has been dammed to form a stock tank.

Soil Type: Soils at 41PS1054 have been identified as 80 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes, and 20 percent Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1054 is 4,280 feet AMSL.

Vegetation: Vegetation in the area is relatively sparse and consists of typical Chihuahuan Desert scrub. Surface visibility was 70 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, as well as bulldozing to create the earthen stock tank and check dams in the area. The site is estimated to be 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1054 was recorded in 2008. Several cultural features were identified on the site, including a small boulder shelter composed of two large boulders that provide a small protective overhang. Several weathered 1 by 4-inch boards were found lying on the shelter floor, and were perhaps used as part of a makeshift bed. Several twentieth century tin cans were recorded scattered across the shelter floor. Other features documented on the site include an earthen stock tank (36 by 42 meters) and two associated check dams, each about 10 meters long. One of these dams is made of earth; the other is constructed of stone. A rock cairn is located on the earthen dam. Two water troughs were also noted; both are constructed of concrete and measure 4.8 by 1.2 meters. Based on arroyo cutbank profiles, the maximum depth of cultural deposits at 41PS1054 is 20 centimeters.

Artifacts: Artifacts observed at this site include a post-1930 'Tequila Cuervos' bottle, six 1 by 4-inch sawn boards, three rolled seam tin cans, two sardine cans, and a 'Duraglas' Mason jar. Four chipped stone flakes were observed on the site, but were not considered sufficient to assign a prehistoric component to this site.

Significance: Site 41PS1054 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1054.

***41PS1055***

Site Type: Site 41PS1055 is a boulder shelter with a prehistoric occupation of unknown age, and twentieth century debris.

Site Area: The site measures 80 meters north-south by 50 meters east-west, encompassing 0.99 acre.

Landform: The site is located at the base of a small hill with colluvial boulders scattered across the base. The shelter overlooks a flat bench that, in turn, overlooks a tributary to Auras Canyon; a saddle-like setting.

Soil Type: Soils in the area of 41PS1055 have been mapped by the Natural Resources Conservation Service as 80 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes, and 20 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1055 is 4,200 feet AMSL.

Vegetation: Desert scrub and cacti covers the site. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, and the previous establishment of an unimproved two-track road through the area. The site is estimated to be 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1055 was recorded during the 2008 field season. A south-facing boulder shelter, measuring 4 meters wide by 3 meters deep by 3 meters high, was identified at this site. An associated talus slope containing firecracked rocks, dark midden soil, and chipped stone debitage extends 2 meters beyond the shelter entrance. A boulder at the south end of the shelter has five grinding facets; a mano was discovered on the boulder. Based on the nature of the soil within the boulder shelter, it is estimated that cultural deposits could extend to a depth of approximately 20 centimeters.

Artifacts: The artifact assemblage is comprised of a mano, firecracked rocks, chipped stone debitage, bifaces, scrapers, and utilized flakes. Historic items, none of which were associated

with the boulder shelter at this site, include a partial 55-gallon drum, a ferrous strap fragment, and spent cartridges.

Significance: Site 41PS1055 is considered to have moderately low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1055.

***41PS1056***

Site Type: Site 41PS1056 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 50 meters north-south by 40 meters east-west, encompassing 0.49 acre.

Landform: The site is located along the east bank of a headwater drainage to Auras Canyon.

Soil Type: The NRCS has identified soils in the area of 41PS1056 as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of the site is 4,240 feet AMSL.

Vegetation: Desert scrub and cacti covers the site area. Surface visibility is 80 percent.

Disturbance: Site 41PS1056 has been impacted by erosion, and animal burrowing and trampling.

Previous Investigations: None.

Present Investigation: Site 41PS1056 was recorded in 2008. This site consists entirely of a very light lithic scatter, and was only recorded as an archeological site due to the presence of a metate fragment. Based on the gravel surface in this area, it is estimated that the depth of cultural deposits is less than 10 centimeters.

Artifacts: Artifacts observed at this site are limited to a very light scatter of chipped stone debitage, one scraper, and one ground stone metate fragment.

Significance: Site 41PS1056 has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1056.

***41PS1057***

Site Type: Site 41PS1057 is a boulder shelter with archeological deposits of unknown prehistoric age.

Site Area: The site measures 120 meters northeast-southwest by 80 meters northwest-southeast, encompassing 2.37 acres.

Landform: The site is located along an unnamed intermittent drainage about one mile east of Auras Canyon. The shelter sits above the stream terrace along the base of a small hill, among large colluvial boulders. The adjacent stream terrace retains evidence of occupation and forms the site boundary to the south.

Soil Type: Soils in the area of 41PS1057 have been mapped by the NRCS as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation range of 41PS1057 ranges from 4,240 to 4,280 feet AMSL.

Vegetation: Vegetation on this site is sparse. Desert scrub and cacti covers the site area and surface visibility was 80 percent.

Disturbance: This site has been impacted by erosion and animal disturbance, but remains approximately 90 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1057 was recorded in 2008. A small south-facing boulder shelter was recorded (measuring approximately 1.5 meter wide by 1 meter deep by 1 meter high). An associated talus slope, measuring 9 by 9 meters, is located to the south of the shelter. Firecracked rocks, dark midden soil, and chipped stone debitage were observed in the talus. A large boulder metate was recorded along the eastern edge of the talus. Beyond the shelter and talus, chipped stone artifacts were evident on the ground surface extending about 100 meters south to an intermittent drainage. Based on the relief on the talus slope, it is estimated that the depth of deposits is approximately 50 centimeters.

Artifacts: Firecracked rocks, chipped stone debitage, bifaces, and manos were observed on the site. No diagnostic artifacts were evident.

Significance: Site 41PS1057 has the potential to contain significant intact buried cultural deposits, retaining moderately high research value. The site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: This site is situated approximately 100 meters north of the Nopalera Trail, and may not draw the attention of trail users. Nonetheless, this site should be monitored at least biannually. This monitoring schedule should be reviewed annually and revised as warranted by the amount of usage that this trail receives. In addition, this site should be nominated as an official State Antiquities Landmark.

***41PS1062 (Papalote Severo)***

Site Type: Site 41PS1062 is a nineteenth and twentieth century ranching complex, with remnants of a possible earlier Protohistoric/ Historic component.

Site Area: The site measures 170 meters north-south by 130 meters east-west, encompassing 5.47 acres.

Landform: The site is located along both sides of Auras Canyon at Papalote Severo.

Soil Type: The NRCS has identified soils at 41PS1062 as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is 3,840 feet AMSL.

Vegetation: Vegetation at 41PS1062 is sparse and consists of typical Chihuahuan Desert scrub, including creosote, prickly pear, and bunch grasses. Surface visibility is 70 percent.

Disturbance: This site has been impacted by erosion and animal disturbances. The Nopalera Trail, which utilizes an existing ranch road, ends at this site. The site is estimated to be 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1062 was recorded in 2008. Several historic features and artifacts associated with ranching were documented. These features are a rock and mortar well (1.5 meter diameter, 53 centimeters above ground, and 1.9 meter deep) under an Aeromotor windmill; a rock and mortar stock tank (5 by 4 meters; 1.56 meter tall) with a mostly buried concrete trough (4.5 by 0.6 meter) connected at the northwest corner of the stock tank; a stacked stone structure/pen (5 by 4 meters; 1.5 meter tall) composed of boulders and a wire fence around the top, and containing domestic artifacts and a two-plank bench; a hearth of unknown age composed of eight

rocks; a stone semicircle (1.3 by 1.1 meter) of unknown age; and, a second corral composed of wooden posts and goat wire (12.3 by 11 meters). Based on cutbank observations, the maximum depth of cultural deposits at 41PS1062 is estimated to be 10 centimeters.

Artifacts: Artifacts observed at this site include one brass pump fitting, a brass plug, windmill blades, a windmill sucker rod, tin cans, one lard can lid, brown bottle glass, a twentieth century fence stretcher, one inch by four inch boards, a 30–06 cartridge, one horseshoe, and a brown medicine bottle with the wording 'Franklin Products 1845'. Eight slipped and unslipped Capote Plain sherds and 13 Conchos Plain slipped and unslipped sherds were recovered for curation.

Significance: The hand dug and rock-lined well at 41PS1062 is an uncommon feature type in the Big Bend, and the overall condition of the site is fair. Nonetheless, unless vandalism becomes apparent at this site, it is not recommended for designation as an official State Antiquities Landmark

Recommendations: Site 41PS1062 should be monitored at least biannually, and possibly more, if warranted by increased trail usage. If vandalism becomes an issue, then consideration will be given to nominating this site for designation as a State Antiquities Landmark.

**Auras Cut-Off Trail**

The multi-use Auras Cut-Off Trail requires new construction and will measure three feet in width, extending approximately 1.8 miles from Nopalera Road to the main park road in the central part of BBRSP (Figure 19). The TPWD Archeology Survey Team conducted the archeological survey of the Auras Cut-Off Trail corridor on February 9 and 10, 2008. The actual area surveyed, including areas inspected as part of the visual corridor, is 100 acres. Five previously unrecorded archeological sites were documented during the survey of the Auras Cut-Off Trail (41PS1058–41PS1061 and 41PS1069). Site descriptions are below; site summary data are in Appendix A. Ten isolated finds were identified (Appendix C).

***41PS1058***

Site Type: Site 41PS1058 is a lithic scatter and lithic procurement site of unknown prehistoric age.

Site Area: The site measures 250 meters north-south by 200 meters east-west, encompassing 12.35 acres.

Landform: The site is situated at the base of two large hills, above the west bank of an unnamed tributary of Bofecillos Canyon.

Soil Type: The NRCS has identified soils in the area of 41PS1058 as Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1058 ranges from 3,760 to 3,800 feet AMSL.

Vegetation: Desert scrub and cacti covers the site area. Ground surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, and animal burrowing and trampling, but is estimated to remain 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1058 was recorded in 2008. This site consists of an extensive lithic scatter of black quartzite, including one small concentration of about 20 flakes. The quartzite occurs naturally in the area, eroding from the base of two hills adjacent to the lithic scatter. Although a historic trail route is reportedly located in the vicinity, it was not apparent at the time of the 2008 investigation.

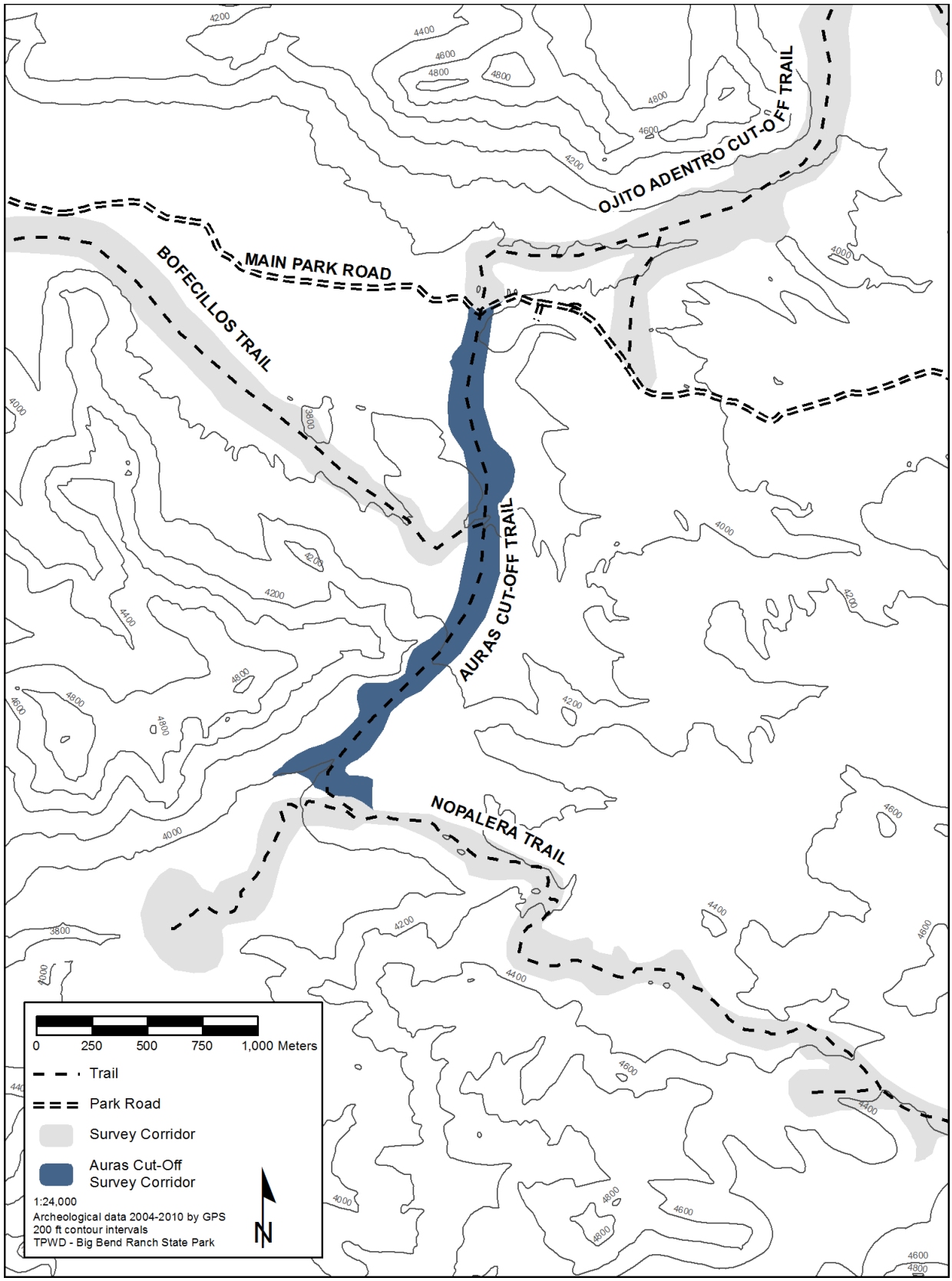


**Figure 19.** Map showing location of Auras Cut-Off Trail.

Based on cutbank observations, the depth of deposits at 41PS1058 is about 10 centimeters.

Artifacts: Artifacts documented at this site include chipped stone debitage, cores, and bifaces, as well as one hammer stone.

Significance: Site 41PS1058 has moderate research potential, but does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The Auras Cut–Off Trail, as originally planned, would have extended through 41PS1058; however, the trail was rerouted to avoid the site. No further work is recommended at 41PS1058.

***41PS1059***

Site Type: Site 41PS1059 is a lithic scatter and lithic procurement site of unknown prehistoric age.

Site Area: The site measures 160 meters north-south by 80 meters east-west, encompassing an area of 3.16 acres.

Landform: The site is located at the base of a large hill, above the west bank of an unnamed tributary of Bofecillos Canyon.

Soil Type: Soils in the area of 41PS1059 have been identified by the NRCS as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1059 ranges from 3,760 to 3,800 feet AMSL.

Vegetation: Desert scrub and cacti cover the site area. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, and animal burrowing and trampling, but remains approximately 80 percent intact

Previous Investigations: None.

Present Investigation: Site 41PS1059 was recorded in 2008. This site is a lithic scatter and lithic procurement area of black quartzite (similar to 41PS1058). The quartzite occurs naturally in the area, eroding from the base of a large hill adjacent to the lithic scatter. A historic trail route is reportedly located in the vicinity, but was not evident at the time of the present investigation. Based on cutbank observations, the depth of deposits at 41PS1059 is about 10 centimeters.

Artifacts: Artifacts observed at this site consist of chipped stone debitage, cores, and bifaces.

Significance: Site 41PS1059 has moderate research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1059.

***41PS1060***

Site Type: Site 41PS1060 is a Late Archaic lithic scatter.

Site Area: The site measures 30 meters north-south by 90 meters east-west, encompassing 0.66 acres.

Landform: The site is located along the north bank of a tributary to Bofecillos Canyon, near the confluence of this drainage with another unnamed tributary.

Soil Type: Site 41PS1060 is located in an area of soils identified by the NRCS as Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1060 is 3,740 feet AMSL.

Vegetation: Desert scrub and cacti cover the site area, and surface visibility is 80 percent.

Disturbance: This site has been extensively impacted by erosion, and is estimated to be only 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1060 was recorded in 2008. This site is a light lithic scatter from which one dart point was recovered. No cultural features or other lithic tools were observed. A historic trail route is reportedly located in the vicinity, but was not evident at the time of the investigation. Based on cutbank observations, the depth of deposits at 41PS1060 is about 30 centimeters.

Artifacts: One Late Archaic expanding stem dart point fragment (untyped) was recovered. Chipped stone debitage were the only other artifacts evident at this site.

Significance: Site 41PS1060 has low research potential and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The Auras Cut–Off Trail, as originally planned, would have extended through 41PS1060; the trail was subsequently rerouted to avoid the site. No further work is recommended at 41PS1060.

***41PS1061***

Site Type: Site 41PS1061 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 40 meters north-south by 40 meters east-west, encompassing an area of 0.39 acre.

Landform: The site is situated about 100 meters north of a tributary to Bofecillos Canyon.

Soil Type: Soils in the area of 41PS1061 have been identified as Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1061 is 3,740 feet AMSL.

Vegetation: Vegetation at this site is relatively sparse, and consists of creosote, ocotillo, prickly pear, and bunch grasses. Surface visibility is 80 percent.

Disturbance: This site has been extensively impacted by erosion, and is estimated to be approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1061 was recorded in 2008. This site is a relatively dense lithic scatter with a variety of lithic materials, but no diagnostic artifacts or cultural features were observed. Based on cutbank observations, the depth of deposits at 41PS1061 is about 30 centimeters.

Artifacts: Artifacts observed at 41PS1061 consist of chipped stone debitage, bifaces, and a few fragments of ground stone.

Significance: Site 41PS1061 has low research potential and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: The Auras Cut–Off, as originally planned, would have extended through 41PS1061; the trail was subsequently rerouted to avoid the site. No further work is recommended at 41PS1061.

***41PS1069***

Site Type: Site 41PS1069 is a rockshelter with an occupation of undetermined Archaic age.

Site Area: The site measures 100 meters northeast-southwest by 60 meters east-west, encompassing 1.48 acres.

Landform: The site is situated on the northwest slope of Auras Canyon. The rockshelter is formed in igneous conglomerate.

Soil Type: Soils in the vicinity of 41PS1069 have been identified by the NRCS as 70 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes and 30 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 4,000 to 4,040 feet AMSL.

Vegetation: Vegetation at the site area includes ocotillo, leatherstem, creosote, and bunch grass, providing 30 percent surface visibility outside the rockshelter. Surface visibility is 100 percent inside the shelter.

Disturbance: Site 41PS1069 has been impacted by erosion, animal burrowing and trampling, and looting. A sifting screen was found on the slope outside the shelter at this site. The site is estimated to be 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1069 was recorded in 2008. The rockshelter at this site is relatively small and located beneath a pour-off. The shelter measures approximately 20 meters wide by 2 meters deep, with a maximum height of about 1.5 meters (but averaging 1 meter or less). An associated talus deposit measures approximately 20 by 20 meters and is 2 meters thick, but drainage from the pour-off has severely eroded the talus, exposing a 1 meter profile. In addition, six boulder metates/grinding facets were noted across the site area.

Artifacts: Chipped stone debitage, one unidentifiable dart point fragment, and firecracked rocks were observed at 41PS1069. No artifacts were removed from the site for curation.

Significance: Although this site is estimated to be only 50 percent intact, it is considered to have moderately high research value. The site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: The Auras Cut-Off Trail is located about 150 meters from 41PS1069. Nonetheless, this site should be monitored on at least a biannual basis, and possibly more frequently depending on visitor use of the area. This site should be nominated as a State Antiquities Landmark.

### Ojito Adentro Cut-Off Trail

The Ojito Adentro Cut-Off Trail (Figure 20) requires new construction and measures three feet in width. The trail extends northeast from the main park road approximately 1.9 miles to the trail route identified as the Yedra Jump, in the central part of BBRSP.

The TPWD Archeology Survey Team conducted the archeological survey of the Ojito Adentro Cut-Off Trail on February 11 and 12, 2008. The total area surveyed during this investigation was 131 acres. One previously recorded archeological site (41PS186) and two newly discovered sites (41PS1063 and 41PS1064) were recorded within this survey corridor. Site descriptions are below. See Appendix A for a summary of site data.

#### *41PS186 (Ojito Adentro)*

Site Type: Site 41PS186 is an open campsite of undetermined Archaic age, and a twentieth century livestock watering area.

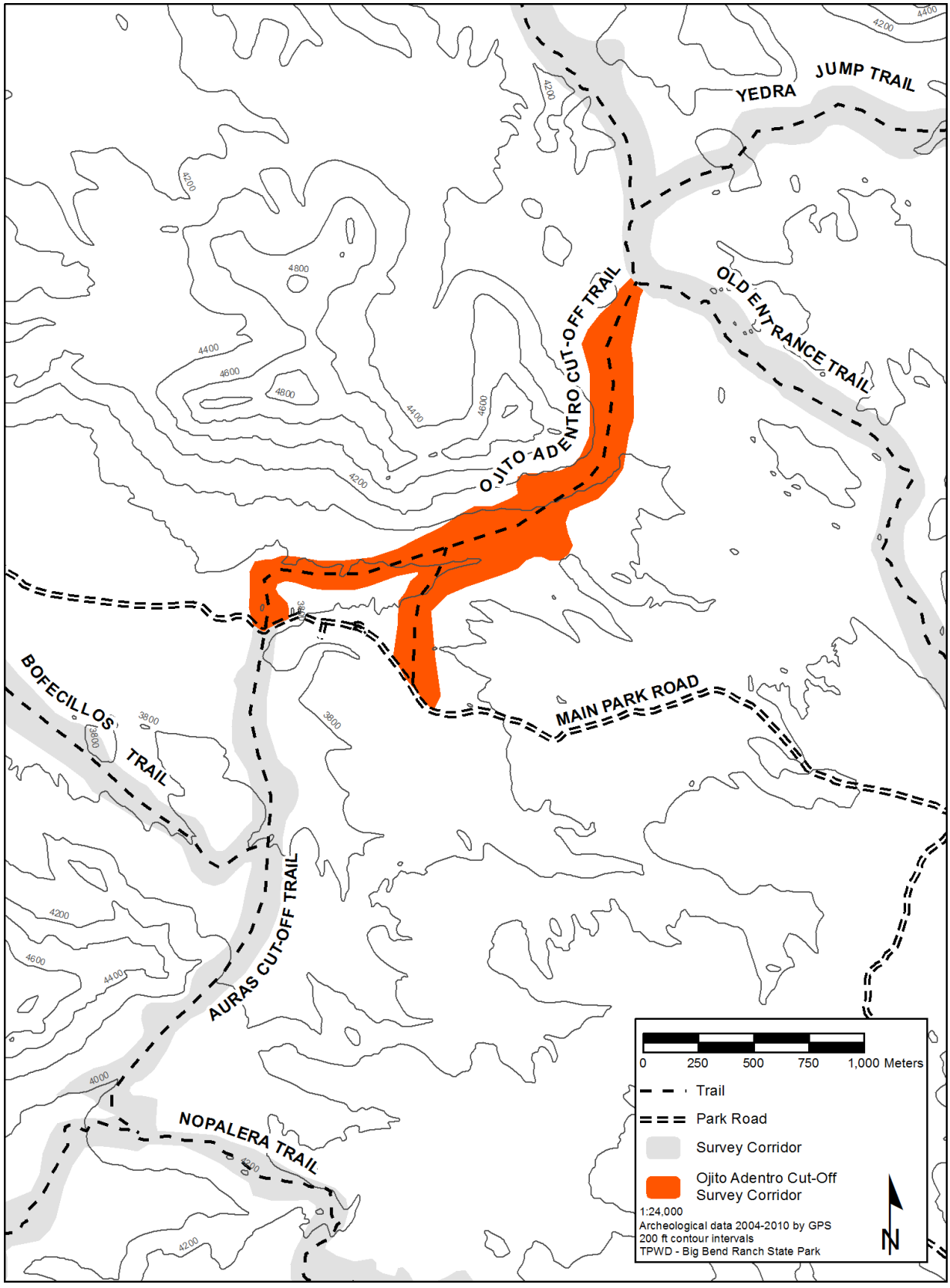


**Figure 20.** Map showing location of Ojito Adentro Cut-Off Trail.

Site Area: The site measures 240 meters southwest-northeast by 80 meters east-west, encompassing 4.73 acres.

Landform: The site is located in Bofecillos Canyon, southeast of Ojito Adentro Spring. The site is further situated on the first terrace on the south side of the Bofecillos Canyon drainage.

Soil Type: Soils in the 41PS186 site area have been identified by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,800 to 3,840 feet AMSL.

Vegetation: Cottonwood trees grow along the drainage at 41PS186; beyond the drainage, vegetation is dominated by creosote and acacias. Surface visibility is 60 percent.

Disturbance: This site has been impacted by erosion, animal burrowing, livestock trampling, and pedestrian traffic to Ojito Adentro. The site remains about 50 percent intact.

Previous Investigations: This site was originally recorded by Barbara Baskin and Gary Moore in 1975, during the Bofecillos Mountains Natural Area Survey (Baskin 1976b:149-181).

Present Investigation: Site 41PS186 was re-recorded in 2008. A large burned rock midden with dark ashy soil and four bedrock mortars in the streambed were recorded. The midden measures approximately 61 by 53 meters. A concrete trough, once spring-fed via a ferrous pipe, was also documented. The artifact scatter at this site includes prehistoric and historic items. Based on cutbank observations, the depth of cultural deposits at 41PS186 may extend as deep as one meter below surface.

Artifacts: Prehistoric artifacts noted at this site are chipped stone debitage, one mano fragment, firecracked rocks, and one untyped dart point fragment (recovered for curation). Documented historic items include tin cans, one sardine can, clear and green bottle glass, nails, lumber scraps, ferrous water pipe and other miscellaneous ferrous pieces of metal.

Significance: Despite being only an estimated 50 percent intact, the research value of 41PS186 is considered to be moderately high, based on the depth of the archeological deposits and the potential to provide additional important data about the prehistoric inhabitants of the area. This site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute to a better understanding of prehistory).

Recommendations: Site 41PS186 should be monitored biannually, in order to document any changes caused by visitors or natural impacts. In addition, this site should be nominated as an official State Antiquities Landmark.

***41PS1063***

Site Type: Site 41PS1063 is a boulder shelter with Late Archaic and Late Prehistoric components.

Site Area: The site measures 50 meters north-south by 70 meters east-west, encompassing 0.87 acre.

Landform: The site is situated on the lower slope of a valley, near the base of the valley wall. The slope is about 30 percent grade and the shelter faces south. A large riparian area around Ojito Adentro is visible to the southeast.

Soil Type: Soils in the 41PS1063 site area have been identified by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1063 ranges from 3,840 to 3,880 feet AMSL.

Vegetation: Desert scrub, including ocotillo, leatherstem, creosote, yucca, opuntia, grasses, and sage, cover the site area. Surface visibility is 90 percent.

Disturbance: Site 41PS1063 has been impacted by erosion, animal burrowing and trampling. The site remains 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1063 was recorded in 2008. A south-facing boulder shelter, measuring 4.5 meters wide by 4.3 meters deep by 1.3 meters high, was identified at this site. The ceiling of this shelter is blackened by soot. Nine boulder metates were documented in the vicinity of the boulder shelter at 41PS1063. One of these boulders also appears to have been modified with the addition of a step. There are no talus deposits associated with this site, but artifacts were observed up to 50 meters downslope from the boulder shelter. Based on the nature of the soil within the boulder shelter, it is estimated that cultural deposits extend no more than five centimeters below surface.

Artifacts: A Late Archaic Palmillas dart point (Form 2) and an untyped Late Prehistoric arrow point fragment were recovered from this site. In addition, chipped stone debitage, two metates, a metate fragment, and two mano fragments were observed at 41PS1063.

Significance: Site 41PS1063 has moderately low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: This site is out of view of the Ojito Adentro Cut-Off Trail, located to the north of this location. No further work is recommended at 41PS1063.

***41PS1064***

Site Type: Site 41PS1064 is a lithic scatter dating to the Late Archaic period.

Site Area: The site measures 100 meters north-south by 90 meters east-west, encompassing 2.22 acres.

Landform: The site is located in a saddle between two unnamed intermittent drainages that feed into Bofecillos Canyon.

Soil Type: Soils in the area of 41PS1064 have been identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1064 is 4,120 feet AMSL.

Vegetation: Vegetation at this site is typical Chihuahuan Desert scrub. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, construction of the existing ranch road, and possibly surface collecting. The site remains about 60 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1064 was recorded in 2008. This site is comprised of a moderately dense lithic scatter, with a variety of lithic materials and artifacts, including two projectile points. No prehistoric cultural features were observed, but an undeveloped ranch road is adjacent to the site. A historic trail is reportedly located in the area, but was not observed at the time of the 2008 survey. It is likely that the existing ranch road follows the reported trail. The Ojito Adentro Cut-Off Trail utilizes the existing ranch road. Based on bedrock exposures in the area, the depth of cultural deposits at 41PS1064 are no more than five centimeters in thickness.

Artifacts: Artifacts recorded at 41PS1064 include one Late Archaic Ensor dart point, one untyped dart point fragment, chipped stone cores, debitage, biface fragments and utilized flakes. The projectiles points were collected for curation.

Significance: Site 41PS1064 has moderately low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1064.

**Yedra Jump Trail**

The Yedra Jump Trail is a multi-use trail that follows an existing unimproved two-track road (Figure 21). The road is approximately eight feet in width, and extends westward approximately 1.8 miles from the Yedra Canyon Trail to the Old Entrance Road.

The TPWD Archeology Survey Team conducted the archeological survey of the Yedra Jump Trail corridor on February 13, 2008. The actual area surveyed totals approximately 113 acres. One previously recorded archeological site, 41PS936, and one isolated find were documented within this survey corridor. Site 41PS936, which is located at the junction of the Yedra Jump Trail and the Yedra Canyon Trail, is reported in the previous Yedra Canyon Trail section of this report. See Appendix C for information on the isolated find.

**Bofecillos Trail**

The multi-use Bofecillos Trail requires new construction and will measure three feet in width. The trail will extend approximately 3.2 miles from the main park road, along the north side of Agua Adentro Mountain, connecting with the previously discussed Auras Cut-Off in the central part of BBRSP (Figure 22).

The TPWD Archeology Survey Team conducted the archeological survey of the Bofecillos Trail February 19 – 22, 2008. The actual area surveyed, including areas within the visual corridor, totals 201 acres. Six previously recorded archeological sites were re-recorded (41PS187, 41PS199, 41PS201, 41PS436, 41PS437, and 41PS1066) and two newly discovered sites were recorded (41PS1065 and 41PS1067) along the Bofecillos Trail. Six isolated finds were documented within this survey corridor. Site descriptions are below; see Appendix A for site summary data. Isolated finds are described in Appendix C.

***41PS187***

Site Type: Site 41PS187 is a Middle Archaic site with two rockshelters and pictographs.

Site Area: The site measures 160 meters north-south by 100 meters east-west.

Landform: The rockshelters at 41PS187 formed in a volcanic tuff outcrop on a toeslope above Bofecillos Canyon.

Elevation: The elevation at this site ranges from about 3,560 to 3,600 feet AMSL.

Vegetation: Vegetation at 41PS187 is sparse and consists primarily of creosote, ocotillo, and prickly pear. Surface visibility is about 80 percent.

Soil Type: Soils in the area of 41PS187 have been identified by the NRCS as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Previous Investigations: This site was originally recorded by Barbara Baskin and Gary Moore during a 1975 Natural Area Survey of the Bofecillos Mountains (Baskin 1976b), and was documented again by David Ing, Mike Davis, and Lynn Pace in 1988 during an archeological reconnaissance of the park (Ing et al. 1996).

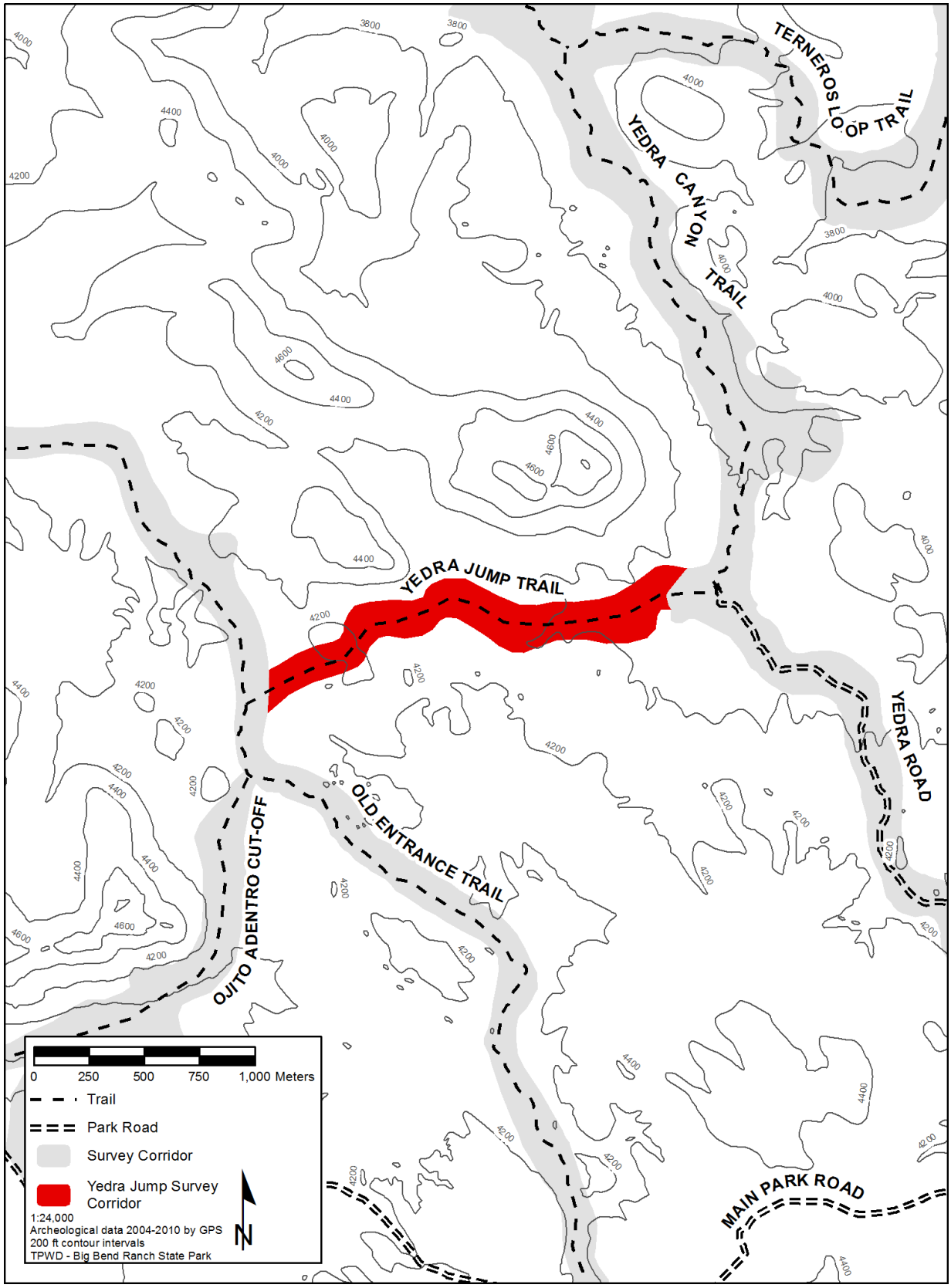


**Figure 21.** Map showing location of Yedra Jump Trail.

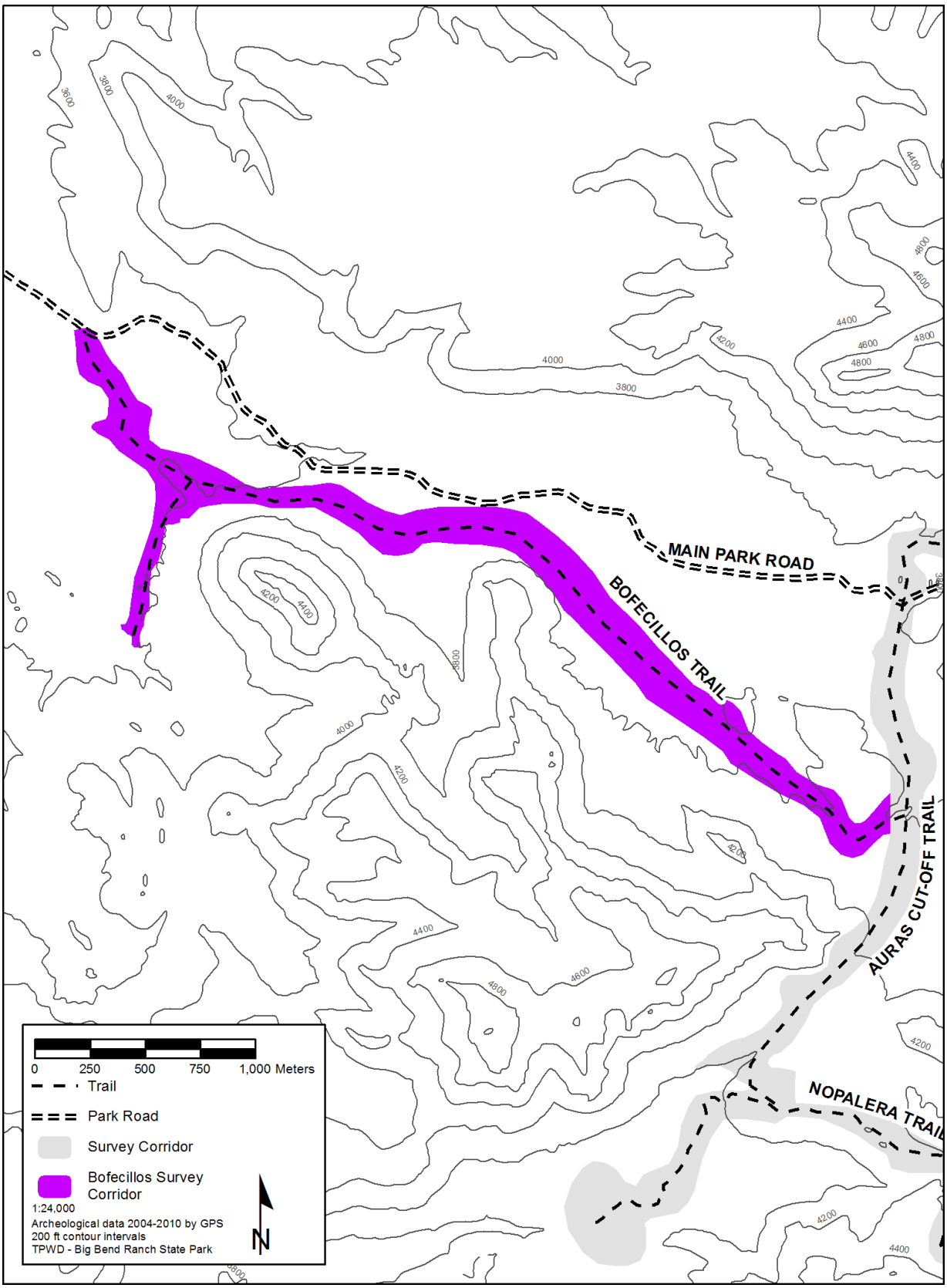


**Figure 22.** Map showing location of Bofecillos Trail.

Present Investigation: Site 41PS187 was re-recorded in 2008. The site assessment consisted primarily of surface inspections; however, a trowel probe was employed to help determine the approximate depth of deposits. Two rockshelters were recorded at the site. The northernmost rockshelter measures 15 meters wide, while the second shelter measured 10 meters in width. Both shelters contain pictographs and soot blackened ceilings. The larger shelter appears to have been more intensively occupied based on the density of artifacts, the size of the associated talus, and the number of bedrock mortars (n=6) and cupules (n=ca. 50) observed in the vicinity of this shelter. Roof fall obscures much of the floor of the southern rockshelter. The rock imagery in the shelters consists of multiple styles of black, red, yellow, and orange pictographs, including anthropomorphs, horse and rider figures, 1-2 handprints, zoomorphs, and geometric forms. Of note among these paintings are a red bison-like figure and an apparent female image. North of the two rockshelters, an additional pictograph panel was discovered on the rock face, and a stacked rock wall likely associated with historic herding was identified. Based on the trowel probe at 41PS187, archeological deposits at this site extend to a depth of at least 40 cm in some parts of the site.

Artifacts: Prehistoric artifacts observed at this site include bifaces, manos, metates, cores, chipped stone debitage, and firecracked rocks. No temporally diagnostic prehistoric artifacts were identified during the present project, but a Middle Archaic Langtry dart point was recovered during the 1975 Natural Area Survey (Baskin 1976b). Several historic artifacts were noted on the talus at 41PS187, including Prince Albert cans and glass fragments.

Disturbances: Erosion, animal burrowing and trampling, and spalling of the rock imagery were apparent during the 2008 investigation of 41PS187. While evidence of vandalism was reported during the original recording of the site in 1975, there was no evidence of more recent vandalism to the site during the present project. The site is estimated to be approximately 70 percent intact.

Significance: Based on the extensive rock imagery and talus/midden deposits at this site, the research potential of the 41PS187 is high. The site merits nomination as an official State Antiquities Landmark under Criteria 1 through 3.

Recommendations: Since investigating 41PS187 in 2008, it was decided not to extend the proposed Bofecillos Trail in proximity of the site. As a result, the potential for new vandalism to this site is considered minimal. Nonetheless, the condition of the site should be monitored at least biannually. In addition, the site should be nominated as an official State Antiquities Landmark.

***41PS199***

Site Type: Site 41PS199 is a rockshelter and open campsite with Archaic and Late Prehistoric components, and a nineteenth century artifact scatter.

Site Area: The site measures 220 meters northwest-southeast by 280 meters northeast-southwest, encompassing 15.23 acres.

Landform: The site is located in Bofecillos Canyon, primarily on the south side of the canyon drainage and around Rancho Viejo Spring; but, there is also some evidence of the site on the north side of the drainage.

Soil Type: Soils in the area of 41PS199 have been identified by the NRCS as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,480 to 3,520 feet AMSL.

Vegetation: Typical Chihuahuan Desert scrub provides surface visibility of approximately 50 percent.

Disturbance: Site 41PS199 has been impacted by erosion, animal burrowing and trampling. There was also evidence of recent visitation to the site, although there was no evidence of collecting or looting. The site is estimated to be about 50 percent intact.

Previous Investigations: This site was originally recorded by Barbara Baskin and Gary Moore in 1975 during the Bofecillos Mountains Natural Area Survey (Baskin 1976b:154).

Present Investigation: Site 41PS199 was re-recorded in 2008. This site includes two ring middens (one is 8.5 meters and the other is 8 meters in diameter), one crescent-shaped midden (7 meters east-west at the opening), one bedrock mortar, and a small rockshelter on the bench above the Bofecillos Canyon drainage. The rockshelter measures 3 meters deep by 10 meters long. A dense prehistoric artifact scatter and lighter historic artifact scatter were also documented. Based on observations of midden soil in the drainage cutbank, archeological deposits at this site extend as much as two meters in depth.

Artifacts: Prehistoric artifacts documented during the present investigation are one untyped Archaic dart point, one Late Prehistoric Scallorn arrow point fragment, chipped stone debitage, cores, bifaces, scrapers, groundstone, and firecracked rocks. The projectile points were recovered for curation. One El Paso Polychrome sherd, one Capote Plain sherd, four olive green lead-glazed sherds, three opaque green lead-glazed sherds, and one undecorated whiteware base with an undecipherable maker's mark were also recovered. A sardine can, Vienna sausage can, clear glass, aqua glass, and other historic ceramics were noted.

Significance: Although 41PS199 is estimated to be only about 50 percent intact, it retains high research value. The site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: The Bofecillos Trail route, as originally planned, would have extended through this site; the trail has since been rerouted to avoid 41PS199. This site should be monitored at least biannually, with the monitoring schedule to be adjusted as necessitated by the level of visitation to the area. The site should be nominated for designation as an official State Antiquities Landmark.

***41PS201(Las Cuevas Amarillas)***

Site Type: Site 41PS201 includes rockshelters, an open campsite, and pictographs with Middle Archaic, Late Archaic, Late Prehistoric, and Historic components.

Site Area: The site measures 740 meters northwest-southeast by 490 meters northeast-southwest, encompassing 89.63 acres.

Landform: The site is located at Agua Adentro Spring, immediately north of the northernmost extent of the Bofecillos Mountains. The site overlooks the Bofecillos drainage, and is bordered by an outcrop of volcanic tuff.

Soil Type: Soils at 41PS201 have been identified by the NRSC as 70 percent Scotal-Rock outcrop complex, 5 to 30 percent slopes, 20 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded, and 10 percent Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,600 to 3,680 feet AMSL.

Vegetation: Vegetation in the site area is typical Chihuahuan Desert scrub, with thick riparian vegetation along the drainage. Surface visibility is 80 percent.

Disturbance: Site 41PS201 has been impacted by erosion, animal burrowing and trampling, and spalling and fading of the pictographs. In addition, the main park road runs through the site and has resulted in considerable dust accumulation on the pictographs. One image was reportedly chiseled off and removed from the site in 1994. Artifact collecting has also occurred on the site. The site is estimated to be about 50 percent intact.

Previous Investigations: Site 41PS201 was originally recorded in 1975 during a reconnaissance of the Bofecillos Mountains that was co-sponsored by the University of Texas Natural Area Survey and the Texas Historical Commission (Baskin 1976b:154, 164, 169–170). The site was identified as a prehistoric and historic open campsite with numerous rockshelters, rock walls, pictographs, midden debris, and one eroded ring midden. Subsurface testing was conducted on the site in the early 1990s by Debra Beene and her field crew as part of her graduate thesis project. During this time, a total of 18 1 $m^2$ test units were excavated in seven middens on the site. These excavations revealed cultural deposits ranging in depth from about 30 to 60 centimeters below surface, and resulted in the recovery of Middle Archaic, Late Archaic, Late Prehistoric, and Historic diagnostic artifacts, as well as non-diagnostic artifacts (Beene 1994).

Present Investigation: Site 41PS201 was re-recorded in 2008. This site includes a long list of cultural features, including at least 10 burned rock middens, a scatter of prehistoric and historic artifacts, five rockshelters with evidence of habitation, bedrock mortars, stacked rock walls, and a number of pictographs. The pictographs are primarily red monochromatic images, including one that is very similar to a red painted figure at site 41PS457 in Leyva Canyon, BBRSP. Detailed summaries of the features can be found in the Master's thesis by Debra Beene (1994:41–77). Based on earlier excavations on the site, archeological deposits at 41PS201 extend at least 30 to 60 centimeters in depth.

Artifacts: Artifacts observed during the 2008 investigation include chipped stone debitage, cores, unifaces, bifaces, and firecracked rocks. No diagnostic artifacts were recovered during this survey.

Significance: Site 41PS201 is an important site because of the extent and depth of archeological deposits, and the number of pictographs that are present at the site. Though the site is estimated to be only about 50 percent intact, it retains the potential to provide additional important data about the prehistoric inhabitants of the area. Site 41PS201 is considered to have moderately high research value, and was listed as an official State Archeological Landmark on May 30, 1997.

Recommendations: The Bofecillos Trail corridor is routed to avoid site 41PS201. Nonetheless, this site, being located along the main park road into BBRSP, is frequently monitored, and will continue to be monitored on a quarterly basis.

***41PS436***

Site Type: Site 41PS436 is a pictograph panel with associated features and artifacts, possibly dating to the Late Prehistoric and Historic periods.

Site Area: The site measures 10 meters north-south by 20 meters east-west, encompassing 0.05 acre.

Landform: The site is located along an outcrop of volcanic tuff, overlooking the Bofecillos drainage. Agua Adentro and Rancho Viejo Springs are visible from the site.

Soil Type: The NRCS has identified soils in the 41PS436 site area as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,600 to 3,640 feet AMSL.

Vegetation: Vegetation in the site area is primarily typical Chihuahuan Desert scrub, with thick riparian vegetation along the drainage. Surface visibility is 90 percent.

Previous Investigations: Site 41PS436 was originally recorded by J. David Ing, Mike Davis and Lynn Pace (Ing et al. 1996). The pictograph style at 41PS436 is identified as Big Bend Bold, as discussed by Roberts (2010). Site 41PS436 is one of only a handful of sites in the Big Bend known to include this pictograph style.

Present Investigation: Site 41PS436 was re-recorded in 2008. The pictograph panel at this site extends about 15 meters along a very shallow rockshelter/rock face of volcanic tuff. The painted figures consist primarily of black anthropomorphic images, but there are some unidentifiable red markings as well. There is at least one badly weathered horse and rider figure. Overall, the panel is in poor condition, and appears to have undergone significant weathering since it was originally recorded in 1988. Other features on this site include two boulder metates, and a rock wall that is probably historic. Artifacts on the site are limited to a few flakes. Based on observations of the soil deposits within the shallow shelter at 41PS436, the archeological deposits at this site extend no more than 10 centimeters below surface.

Artifacts: Only a few pieces of chipped stone debitage were noted.

Disturbance: This site has been impacted by erosion, spalling, weathering of the pictographs, and animal burrowing and trampling. The site is estimated to be approximately 50 percent intact.

Significance: Although there is very little archeological deposition at this site, the rock imagery at 41PS436 falls within a style recently identified by the primary author as Big Bend Bold. This pictograph style appears to be limited to the Big Bend region and is presently known to occur at only seven sites. As a result, the research value of 41PS436 is considered high. The site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: Site 41PS436 will not be impacted by the Bofecillos Trail. Nonetheless, the rock imagery at this site should be thoroughly documented, including the use of D-Stretch photography, and the condition of these pictographs should be monitored on an annual basis. In addition, this site should be nominated for designation as an official State Antiquities Landmark.

***41PS437***

Site Type: Site 41PS437 is a Middle Archaic, Late Archaic, and Late Prehistoric open campsite, with a Protohistoric/Historic component.

Site Area: The site measures 130 meters northwest-southeast by 80 meters northeast-southwest, encompassing 2.57 acres.

Landform: This site is situated on a finger-like gravel pediment ridge which parallels the drainage running between Agua Adentro and Rancho Viejo Springs.

Soil Type: Soils at 41PS437 have been identified as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS437 is 3,600 feet AMSL.

Vegetation: Vegetation at the site area includes ocotillo, creosote, leather stem, and acacia. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, and surface collecting. One artifact cull pile was evident during the present investigation. The site is estimated to be about 40 percent intact.

Previous Investigations: This site was originally recorded by J. David Ing, Mike Davis, and Lynn Pace in 1988 as part of an archeological reconnaissance of what was then Big Bend Ranch State Natural Area. Discussion of the reconnaissance, including 41PS437, is included in the report Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996). Site 41PS437 was originally included the area of site 41PS1066. The area between the two sites was found not to contain archeological deposits during this investigation; therefore they were recorded as two separate sites.

Present Investigation: Site 41PS437 was re-recorded in 2008. This site consists of a lithic scatter, including firecracked rocks. One cultural feature, consisting of an alignment of four rocks, was also noted. Several temporally diagnostic artifacts were among the archeological deposits on this site. Based on the deflated landform upon which 41PS437 is situated, the depth of deposits at this site is estimated to be less than 10 centimeters.

Artifacts: Several diagnostic artifacts, including one Middle Archaic Almagre dart point, one Middle Archaic Langtry dart point, one Late Archaic Palmillas dart point (Form 1), one Late Archaic Palmillas dart point fragment (Form 1), one untyped Late Prehistoric arrow point, and three Conchos Plain pottery sherds, were recovered from the site during the present investigation. In addition, chipped stone debitage, unifaces, utilized flakes, and firecracked rocks were observed. Four or five modern beer cans were also noted.

Significance: Although temporally diagnostic artifacts were recovered from 41PS437, the site is estimated to be only 40 percent intact and has little or no potential to contain intact buried cultural deposits. As a result, the site has low research potential and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS437.

***41PS1065***

Site Type: Site 41PS1065 is a rockshelter with pictographs and a Late Prehistoric occupation.

Site Area: The site measures 120 meters northeast-southwest by 60 meters east-west, encompassing an area of 1.78 acres.

Landform: The site is located at the base of the Bofecillos Mountains, overlooking Bofecillos Canyon. The site is further situated southeast of Rancho Viejo Spring and southwest of Agua Adentro Spring. The southern boundary of 41PS1065 abuts the rock face then slopes quickly down to the flats.

Soil Type: Soils in the area of 41PS1065 have been identified by the NRCS as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1065 ranges from 3,560 to 3,600 feet AMSL.

Vegetation: Vegetation in the site area includes catclaw, agarita, ocotillo, and grasses. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion, animal burrowing, and spalling and fading of the pictographs. Archeological deposits at 41PS1065 have been further impacted by livestock grazing in the area. The site remains approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1065 was recorded in 2008. The shallow rockshelter at this site measures 12 meters across the entrance. This shelter would not have provided much protection from the elements, but does provide shade from the afternoon sun. There is a small talus deposit, measuring 15 by 12 meters, below the shelter. A pictograph panel on the shelter wall consists of two red vertical lines, spaced about 1.5 meters apart. In addition, five boulder metates were recorded on the flats below the shelter. Based on bedrock exposures in the area, it is estimated that the archeological deposits at this site extend no more than 10 centimeters. The archeological deposits at this site are shallow, and the few pictographs are faded and undecipherable beyond the observation that there are two red vertical lines represented.

Artifacts: One Late Prehistoric plainware pottery sherd of unknown type (Type 2) was recovered from 41PS1065. In addition, chipped stone debitage, manos, metates, hammerstones, and firecracked rocks were noted.

Significance: Site 41PS1065 includes Late Prehistoric rockshelter deposits, pictographs, and several boulder metates and the research value of the site is moderate. The site warrants designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: The Bofecillos Trail route, as originally proposed, would have passed through the northern edge of 41PS1065; but, the trail is being rerouted to avoid 41PS1065. The site should be nominated as an official State Antiquities Landmark and monitored biannually.

***41PS1066***

Site Type: Site 41PS1066 is a Late Prehistoric artifact scatter with a few ceramic sherds.

Site Area: The site measures 40 meters north-south by 30 meters east-west, encompassing an area of 0.29 acre.

Landform: The site is located at the base of the Bofecillos Mountains, overlooking Bofecillos Canyon. The site is further situated southeast of Rancho Viejo Spring and southwest of Agua Adentro Spring.

Soil Type: Soils at 41PS1066 have been identified as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1066 is 3,600 feet AMSL.

Vegetation: Vegetation in the site area includes catclaw, agarita, ocotillo, and grasses. Surface visibility was 80 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, but is estimated to remain approximately 80 percent intact.

Previous Investigations: This location was originally recorded in 1988 by J. David Ing as part of archeological site 41PS437 (Ing et al. 1996:210). However, it was determined during the 2008 investigation that 41PS437 does not extend as far south as originally recorded. As a result, this location was recorded as a separate site, and assigned the trinomial 41PS1066.

Present Investigation: Site 41PS1066 was recorded in 2008. The site is comprised of a light

lithic scatter with a few pottery sherds that are believed to be Late Prehistoric plainware with fine sandy paste. No cultural features were identified on the site. Based on cutbank observations, the depth of deposits at 41PS1066 is approximately 10 centimeters.

Artifacts: The pottery sherds at 41PS1066 are of an unknown brownware type, identified as Type 1 in this report (four sherds were recovered for curation). In addition to the pottery sherds, artifacts noted at 41PS1066 include chipped stone debitage, bifaces, and utilized flakes. One tin can was also noted.

Significance: Site 41PS1066 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: The Bofecillos Trail, as originally proposed, would have extended through the southern edge of 41PS1066; the trail will be rerouted to avoid the site. No further work is recommended at this site.

***41PS1067***

Site Type: Site 41PS1067 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 60 meters north-south by 50 meters east-west, encompassing an area of 0.74 acre.

Landform: The site is located on a saddle between two unnamed ephemeral drainages that feed into Bofecillos Canyon.

Soil Type: Soils at 41PS1067 have been identified by the NRCS as 80 percent Bofecillos-Rock outcrop complex, 12 to 60 percent slopes and 20 percent Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1067 is 3,840 feet AMSL.

Vegetation: Vegetation in the site area is relatively sparse and includes creosote, agarita, prickly pear, yucca, and other Chihuahuan Desert scrub. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion and animal disturbances, but remains approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1067 was recorded in 2008. This site is a light lithic scatter. The debitage consists primarily of black quartzite similar to that found at procurement sites 41PS1058 and 41PS1059. Based on bedrock exposures and deflated soils in the area, the maximum depth of archeological deposits at this site is estimated to be 5 centimeters.

Artifacts: Artifacts observed at site 41PS1067 include chipped stone debitage, cores, and utilized flakes produced from black quartzite and chalcedony. Some light green bottle glass, probably originating from Coca-Cola bottles, was also evident on the site.

Significance: Site 41PS1067 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1067.

**Las Burras Trail**

On February 25 and 26, 2008, the TPWD Archeology Survey Team surveyed a portion of the Las Burras Trail in the central part of BBRSP. This trail follows an existing unimproved two-track road eight feet in width, from the Oso Loop Road to the edge of Las Burras Canyon, about 4.5 miles to the southwest. The Survey Team was able to survey 3.1 miles of the trail, extending from the Oso Loop road to a point

on an upland divide between Tapado and Las Burras Canyons (Figure 23).

The actual area surveyed during the Las Burras Trail survey totaled 234 acres. The team re-recorded one previously recorded site (41PS174) and recorded one newly discovered site (41PS1070) along the trail corridor. Site descriptions are below; see Appendix A for a summary of site data. Three isolated finds were documented within this survey corridor (Appendix C).

***41PS174***

Site Type: Site 41PS174 is an Early Paleoindian and Late Archaic open campsite and a rock corral of unknown historic age.

Site Area: The site measures 160 meters northwest-southeast by 130 meters east-west, encompassing an area of 0.74 acre.

Landform: The site is located on the primary bench of an east-west drainage that feeds into Tapado Canyon.

Soil Type: Soils in the area of 41PS174 have been identified by the NRCS as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS174 is 4,320 feet AMSL.

Vegetation: Vegetation in the site area is relatively sparse and includes creosote, agarita, prickly pear, yucca, and other Chihuahuan Desert scrub. Surface visibility is 75 percent.

Disturbance: Site 41PS174 has been impacted by erosion, animal disturbances, former construction of a ranch road, and artifact collecting (surface). The site is approximately 50 percent intact.

Previous Investigations: This site was originally recorded by Barbara Baskin and Gary Moore in 1975 during the Bofecillos Mountains Natural Area Survey (Baskin 1976b:154,158,160). The site was revisited by J. David Ing, shortly after TPWD acquired the Big Bend Ranch property (Ing et al. 1996:97,174).

Present Investigation: Site 41PS174 was re-recorded in 2008. This site is a prehistoric open campsite, and historic rock corral. Prehistoric features are comprised of four hearths, each measuring approximately one meter in diameter, and a large burned rock scatter that measures 32 meters north-south by 26 meters east-west. The stacked rock corral incorporates large boulders in the area. The tallest point on the corral, located on the east side of the feature, is about 1.5 meters tall. Based on observations of partially buried features and a drainage cutbank in the area, the maximum depth of archeological deposits at this site is estimated to be approximately 20 centimeters.

Artifacts: One Early Paleoindian Clovis dart point fragment, one Late Archaic expanding stem dart point (untyped), one Late Archaic Figueroa dart point, and one untyped dart point fragment were collected in 2008. Other artifacts observed include chipped stone debitage, bifaces, unifaces, one mano, three portable metates, and firecracked rocks.

Significance: Deposition at site 41PS174 appears to be minimal, and the research potential is moderate. But the recovery of an Early Paleoindian Clovis dart point meets Criterion 3 for designation as an official State Antiquities Landmark (presence of unique attributes).

Recommendations: The Las Burras Trail follows an existing ranch road through the west end of 41PS174. The site should be monitored on an annual basis. Any diagnostic artifacts identified during monitoring of 41PS174 should be

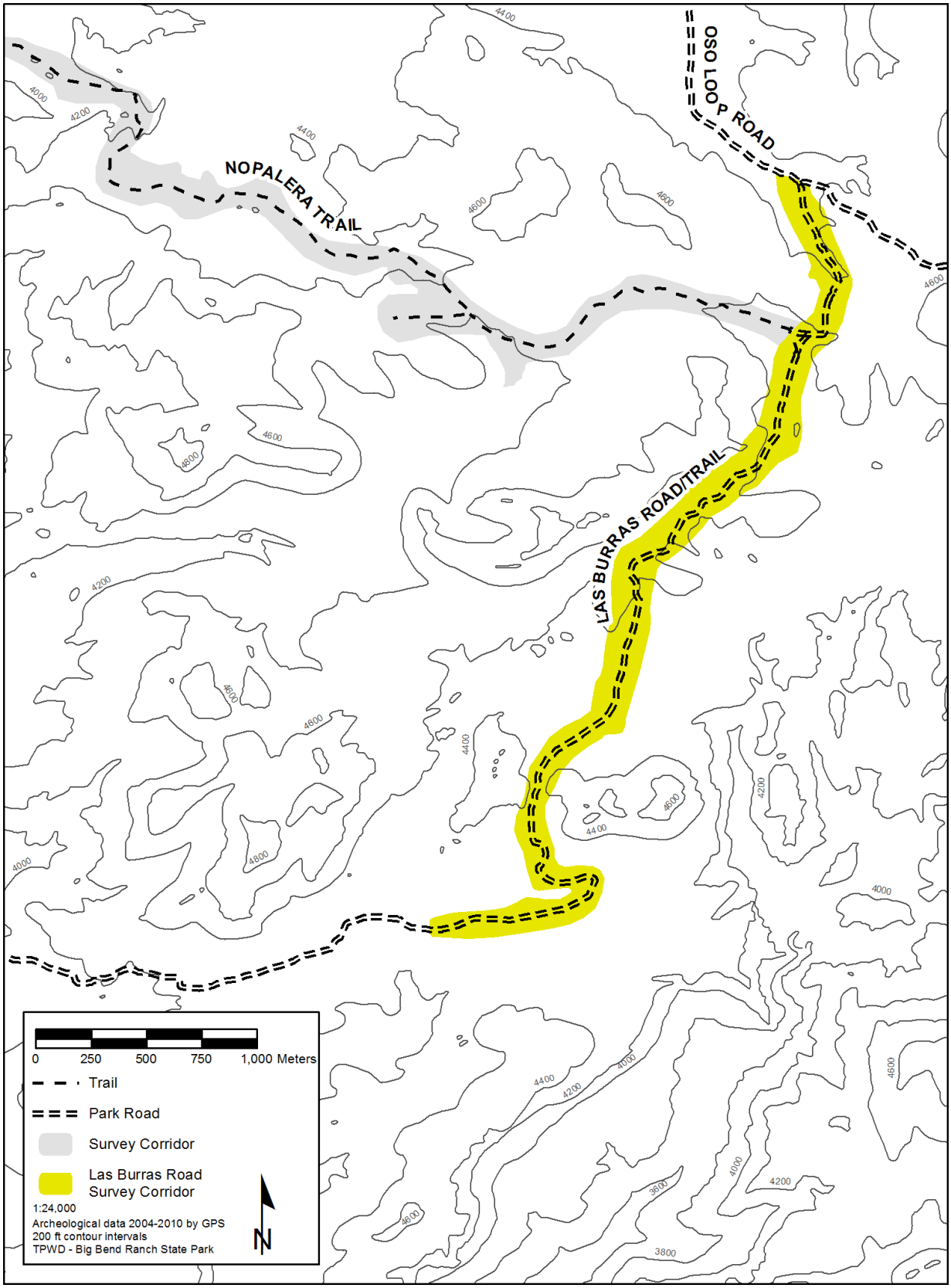


**Figure 23.** Map showing location of Las Burras Trail.

mapped in place and recovered for curation. The site should be nominated for designation as a State Antiquities Landmark.

***41PS1070***

Site Type: Site 41PS1070 is an open campsite that includes an Early Paleoindian component, and a boulder shelter with pictographs of unknown prehistoric age.

Site Area: The site measures 160 meters north-south by 520 meters east-west, encompassing an area of 20.6 acres.

Landform: The site is situated on a gently rolling divide between Tapado and Las Burras canyons. The boulder shelter faces south, and is located near the base of an igneous dike.

Soil Type: Soils in the area of 41PS174 have been identified by the Natural Resources Conservation Service as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation range of 41PS1070 is 4,280 to 4,300 feet AMSL.

Vegetation: Vegetation in the site area includes creosote, yucca, ocotillo, opuntia, fourwing saltbush, and bunch grass. Surface visibility is 100 percent inside the boulder shelter and 80 percent outside the shelter.

Disturbance: Site 41PS1070 has been impacted by erosion, animal disturbance, and the construction of an existing ranch road. In addition, pictographs inside the shelter have deteriorated as a result of weathering. The site is approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1070 was recorded in 2008. Cultural features are comprised of a boulder shelter and an extensive burned rock talus extending south from the shelter. The talus deposit measures approximately 20 meters north-south by 14 meters east-west. The shelter itself has a smoke–blackened ceiling and unidentifiable monochromatic red and black pictographs. Outside the shelter, one ring midden, six hearths, two burned rock scatters, and several bedrock and boulder metates were observed across the site. The ring midden has been truncated by the existing Las Burras Road (Las Burras Trail). Numerous lithic artifacts were evident in association with the cultural features at 41PS1070. The thickness of cultural deposits is unknown, but is probably thin (<10 centimeters) across much of the site, with somewhat thicker deposits within the boulder shelter, talus, and ring midden.

Artifacts: Artifacts observed at this site include chipped stone debitage and debris, cores, bifaces, unifaces, manos, metates, and burned rock. One Early Paleoindian Folsom dart point and one untyped Paleoindian dart point were recovered from the open campsite portion of 41PS1070. The points were produced from an unidentified grey chert, while other lithic artifacts were manufactured from a variety of cherts, chalcedony, rhyolite, and agate.

Significance: Site 41PS1070 has the potential to contain significant intact buried cultural deposits within the boulder shelter, talus, and ring midden, retaining moderately high research value. The site is recommended for nomination as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: This site is bisected by the existing Las Burras Road (used as Las Burras Trail) and may draw the attention of trail users. As a result, this site should be monitored at least biannually. This monitoring schedule should be reviewed annually and revised as warranted by the amount of usage that this

trail receives. In addition, this site should be nominated for designation as an official State Antiquities Landmark.

## 2009 FIELD SEASON

### Lower Fresno Canyon Trail

The lower segment of the Fresno Canyon Trail is a multi-use trail that extends 12.1 miles from FM 170 (also known as the River Road), near the Barton Warnock Environmental Education Center, northwest past the Whit-Roy Mine, and into Fresno Canyon (Figures 24 and 25). This segment of trail then continues northward within Fresno Canyon to the Crawford-Smith Ranchstead (41PS38). The trail utilizes existing unimproved two-track roads and short segments of the Fresno Canyon drainage. Along roads, the width of the trail is eight feet; the width varies along those trail segments that fall within Fresno Creek. The survey of this corridor took place February 4-11 and 17-18, 2009. A total of 682 acres were surveyed along the lower Fresno Canyon Trail corridor. Ten previously recorded archeological sites (41BS763, 41PS36, 41PS38, 41PS39, 41PS162–164, 41PS166, 41PS167, 41PS472) were re-recorded during this survey and 17 newly discovered sites (41BS1916–1919, 41PS1077–1088, and 1102) were recorded. Site descriptions are provided below and site summaries can be found in Appendix A. In addition, 25 isolated finds were recorded (Appendix C).

#### *41BS763*

Site Type: Site 41BS763 is an open campsite of unknown prehistoric age and an early twentieth century candelilla wax camp.

Site Area: The site measures 460 meters northeast-southwest by 270 meters east-west, encompassing 30.66 acres.

Landform: Site 41BS763 is situated on a bench on the northeast bank of an unnamed arroyo.

Soil Type: Soils within the site area have been identified by the NRCS as 80 percent Mariscal-Rock outcrop complex, 10 to 30 percent slopes and 20 percent Strawhouse-Stillwell complex, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41BS763 ranges from 2,520 to 2,600 feet AMSL.

Vegetation: Vegetation at this site is about 95 percent creosote, with leatherstem, dog cholla, acacia, Christmas cactus, yucca, and ocotillo. Surface visibility is 80 percent.

Disturbance: The prehistoric component of this site has been severely impacted by the subsequent historic occupation of the site. In addition, this site has been impacted by moderately severe erosion, and possibly more recent surface collecting. An ephemeral trail leads from an existing road (i.e., formal lower Fresno Canyon trail) to the site. Site 41BS763 is estimated to be about 60 percent intact.

Previous Investigation: This site was originally recorded by William A. Cloud, Bruce Nightengale, and Virginia Wulfkuhle in 1989, and is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996).

Present Investigation: Site 41BS763 was re-recorded in 2009. The survey resulted in the identification of five prehistoric hearths, two hearths of unknown age, six burned rock middens, two bedrock mortars, four wax fire pits/vats, one wax ash zone/talus, two possible residential stacked rock ruins, one rock corral, one boulder with attached wire, and a possible cemetery with three or four graves. One grave had a vertical, shaped limestone upright, associated with a U-shaped rock cluster. Numerous lithic artifacts were observed on the site, as

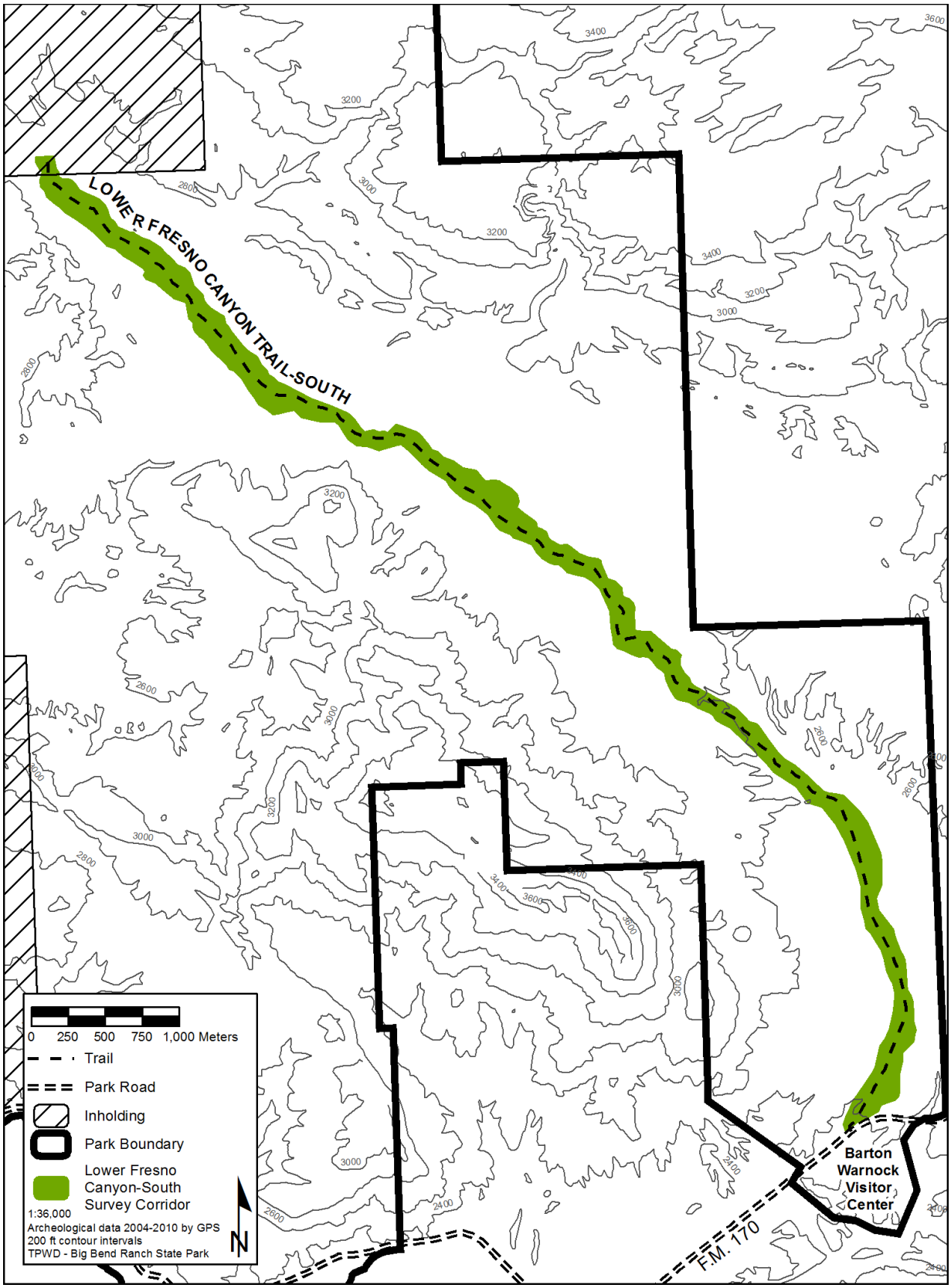


**Figure 24.** Map showing location of Lower Fresno Canyon Trail - South.

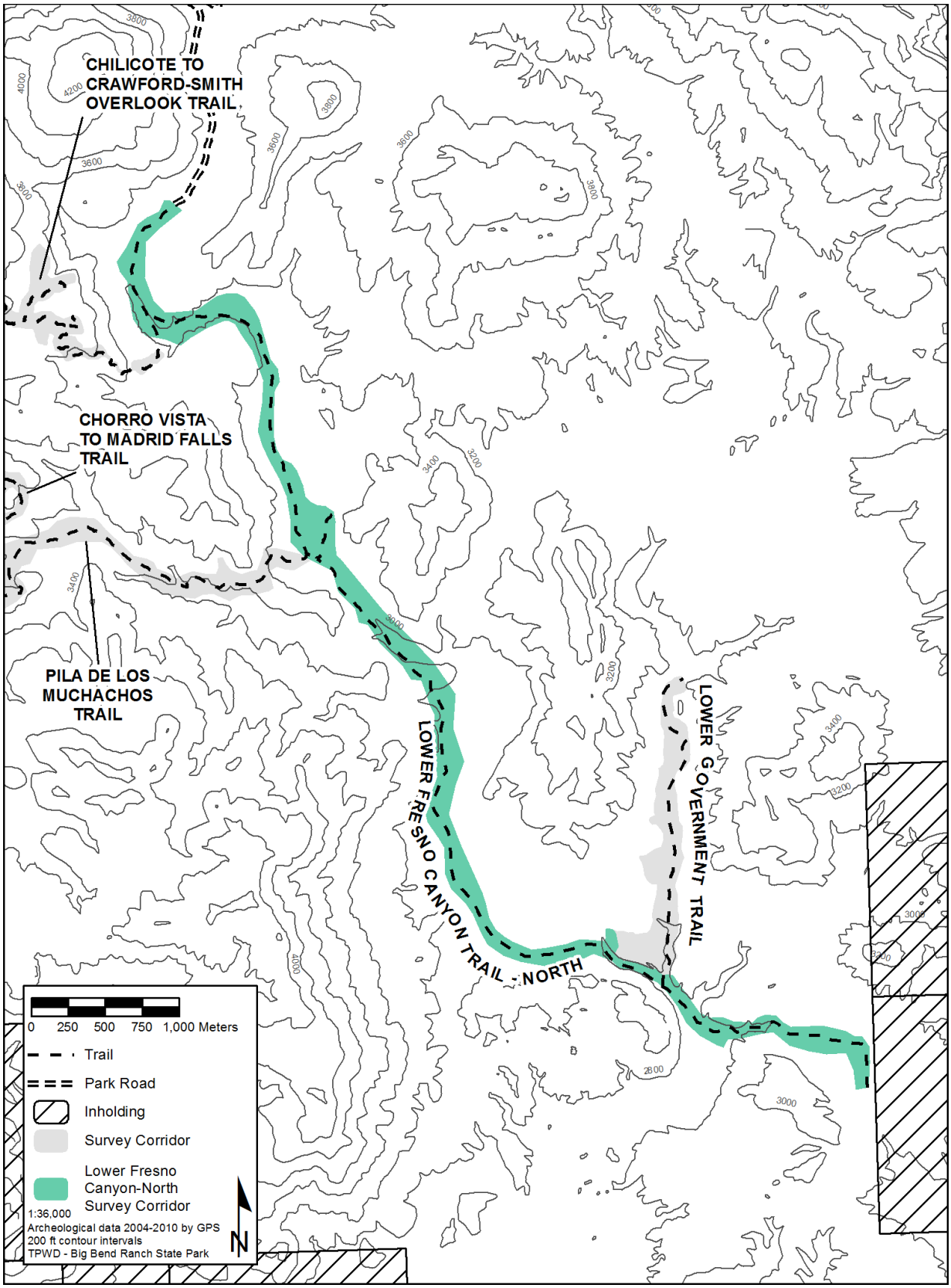


**Figure 25.** Map showing location of Lower Fresno Canyon Trail - North.

well as several historic artifacts dating to the first half of the twentieth century. Observations of an erosional gully on the site indicate that the maximum depth of cultural deposits at this site is up to 60 centimeters.

Artifacts: Prehistoric artifacts observed at 41BS763 consist of chipped stone debitage, cores, one mano, and firecracked rocks. No diagnostic prehistoric artifacts were identified at the site. Historic items at the site include tin and aluminum cans, clear, amber, green, and brown bottle glass, undecorated porcelain sherds, enamel pans, window screen, and barbed wire.

Significance: Despite the various impacts to 41BS763, some features, both prehistoric and historic, remain intact. The site retains moderate research value. The site was designated an official State Archeological Landmark on September 20, 1991.

Recommendations: An arroyo separates 41BS763 from an existing road/trail, but the historic features are visible from this road. In an effort to dissuade trail users from accessing the site, interpretive signage about the site was placed along the east side of the existing road in 2007 (placement of the sign at this location was also intended to draw the attention of trail users from archeological site 41BS1917, located on the opposite side of the road). In addition, 41BS763 is monitored at least quarterly, including visits immediately following spring break and other large events in the Terlingua/Lajitas area. No vandalism has been documented at this site since the 2009 field season.

***41BS1916***

Site Type: Site 41BS1916 is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures 140 meters north-south by 130 meters east-west, encompassing 4.49 acres.

Landform: Site 41BS1916 is concentrated on two small knolls overlooking a small intermittent drainage.

Soil Type: Soils within the site area have been identified by the NRCS as Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41BS1916 is 2,640 to 2,680 feet AMSL.

Vegetation: Vegetation at this site is sparse and consists of typical Chihuahuan Desert scrub. Surface visibility is 90 percent.

Disturbance: This site has been impacted by sheet erosion, but remains about 90 percent intact.

Previous Investigation: None.

Present Investigation: Site 41BS1916 was recorded in 2009. The site is comprised of two lithic concentrations, each of which is located on a separate small knoll. The knolls are separated by a small intermittent drainage. However, a lesser number of lithics connect the two concentrations. No cultural features were evident. Based on the deflated nature of the landform, the thickness of the cultural deposit at 41BS1916 is less than five centimeters.

Artifacts: Cultural materials observed at 41BS1916 are chipped stone debitage, cores, and bifaces.

Significance: This site has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41BS1916.

***41BS1917***

Site Type: Site 41BS1917 is an open campsite of unknown prehistoric age.

Site Area: The site measures 40 meters northwest-southeast by 40 meters east-west, encompassing 0.39 acre.

Landform: Site 41BS1917 is situated on a small terrace on the southwest bank of an unnamed arroyo.

Soil Type: Soils within the site area have been identified by the NRCS as Strawhouse-Stillwell complex, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41BS1917 ranges from 2,520 to 2,560 feet AMSL.

Vegetation: Vegetation at this site is sparse and consists of typical Chihuahuan Desert scrub. Surface visibility is 90 percent.

Disturbance: The burned rock midden at 41BS1917 has been severely impacted by the former bulldozing of a road through the area, and continued use of the road. This road is also now utilized as a multi-use hiking, biking, and equestrian trail. The site has also been impacted by erosion. Only 10 percent of 41BS1917 remains intact.

Previous Investigation: None.

Present Investigation: Site 41BS1917 was recorded in 2009. Only one cultural feature, a truncated burned rock midden, was observed at this site. The remaining portion of this midden is located on the southwest side of an existing road, with dark gray midden soil extending across the road. Lithics were observed in association with the midden. Observations of the roadcut indicate that the maximum depth of cultural deposits at this site was approximately 60 centimeters.

Artifacts: Cultural material at 41BS1917 is limited to chipped stone debitage, manos, and firecracked rocks.

Significance: This site has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: In 2007, signage was placed on the opposite side of the road to interpret 41BS763 for trail users, and to draw their attention away from what remains of 41BS1917. No additional work is recommended at 41BS1917.

***41BS1918***

Site Type: Site 41BS1918 is a lithic procurement site of unknown prehistoric age, and a twentieth century ranching component.

Site Area: The site measures 1,090 meters northwest-southeast by 300 meters northeast-southwest, encompassing 80.78 acres.

Landform: Site 41BS1918 is situated on a lowland ridge and backslope.

Soil Type: Soils within the site area have been identified by the NRCS as 70 percent Strawhouse-Stillwell complex, 1 to 8 percent slopes, and 30 percent Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41BS1918 is 2,720 to 2,760 feet AMSL.

Vegetation: Vegetation at this site is sparse and consists primarily of creosote. Surface visibility is 90 percent.

Disturbance: The upland landform upon which 41PS1918 is situated is severely deflated and bisected by intermittent drainages. Nonetheless, the site remains approximately 70 percent intact.

Previous Investigation: None.

Present Investigation: Site 41BS1918 was recorded in 2009. The site is comprised of four rock cairns of unknown age (prehistoric or historic), and a rock foundation (2.6 by 2.8 meters) with barbed wire. Lithic artifacts are abundant; historic artifacts are limited to two metal items. Based on the deflated nature of the landform, the thickness of the cultural deposit at 41BS1918 is less than 5 centimeters.

Artifacts: Prehistoric artifacts observed at 41BS1918 include chipped stone debitage, cores, and bifaces. No diagnostic artifacts or tools were evident among the prehistoric material. Historic items were limited to barbed wire and one tin can rim.

Significance: This site has moderate research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41BS1918.

***41BS1919***

Site Type: Site 41BS1919 is an open campsite of unknown prehistoric age and an early twentieth century artifact scatter.

Site Area: The site measures 60 meters east-west by 40 meters north-south, encompassing 0.59 acre.

Landform: Site 41BS1919 is situated on a low terrace remnant. Gravel bars are evident along the southern boundary of the site.

Soil Type: Soils within the site area have been identified by the NRCS as Strawhouse–Stillwell complex, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41BS1919 is 2,720 to 2,760 feet AMSL.

Vegetation: Vegetation is sparse across the site and consists primarily of creosote. Surface visibility is 90 percent.

Disturbance: Site 41BS1919 has been impacted by erosion and bulldozing. An existing road (i.e., present trail) crosses the northern portion of the site, and a dozer berm extends from the road onto the site. The site remains only about 40 percent intact.

Previous Investigation: None.

Present Investigation: Site 41BS1919 was recorded in 2009. Only one feature was recorded—a hearth, measuring approximately 1.9 by 2.5 meter. Lithic artifacts, as well as several historic artifacts, were noted on the surface. Based on the deflated nature of the landform, the thickness of the cultural deposit at 41BS1919 is less than five centimeters.

Artifacts: Prehistoric artifacts documented at 41BS1919 include chipped stone debitage, cores, and bifaces. No diagnostic artifacts or tools were evident among the prehistoric material. Historic items include barbed wire, one tin can lid (from a sardine can), one Prince Albert can, two spent cartridges with headstamps ('R–P 30– 06SPRG' and 'F A 11 6'), and one piece of milled wood.

Significance: This site has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41BS1919.

***41PS36 (part of 41PS1102, Buena Suerte cinnabar mill and settlement)***

Site Type: Site 41PS36 is a multi-component site, with a Middle Archaic open campsite and early twentieth century settlement. The historic component is part of the Buena Suerte settlement (41PS1102).

Site Area: The site measures 270 meters northwest-southeast by 250 meters northeast-southwest, encompassing 16.7 acres.

Landform: Site 41PS36 is situated on a high bedrock terrace above the northeast bank of Fresno Creek.

Soil Type: The NRCS has mapped soils within the site area as Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS36 is 2,810 to 2,990 feet AMSL.

Vegetation: Vegetation is sparse and includes woody shrubs, cacti, succulents, and mixed grasses. Surface visibility is 80 percent.

Disturbance: Site 41PS36 has been impacted by erosion and surface collecting. The site remains approximately 60 percent intact.

Previous Investigation: This site was originally recorded by the Texas General Land Office in 1973, during an archeological survey of Chorro(b) Canyon (GLO 1973). In 1973, the site was recorded as a rock and cement bridge base and retaining wall, purportedly constructed by the U. S. Army during campaigns against Pancho Villa.

Present Investigation: Site 41PS36 was re-recorded in 2009. Two sections of the original retaining wall were located, as well as a road bed. In addition, several other historic features that had not been previously recorded were identified. These features include one rock cairn, seven structure/tent pad rock alignments, one cable anchor, one depression, one hearth, one platform, one berm, and three dumps. The historic dumps contain a variety of primarily domestic items, described below. It was initially thought that this part of 41PS36 might represent a military encampment associated with the construction of the retaining wall, bridge, and road in this area. However, subsequent research showed this habitation area to be part of the Buena Suerte settlement associated with the Buena Suerte cinnabar flotation mill (41PS1102). In addition to the historic component at 41PS36, prehistoric features include three burned rock scatters and one hearth. A lithic scatter is associated with the prehistoric features. Based on the shallow, gravelly soils in the site area, the thickness of the cultural deposit at 41PS36 is less than 10 centimeters.

Artifacts: Prehistoric artifacts documented at 41PS36 include chipped stone debitage, cores, bifaces, one Middle Archaic Jora dart point (recovered for curation), and firecracked rocks. Historic artifacts observed within the three dumps include numerous tin cans, bottle glass, and ceramic sherds; additional historic artifacts, including nails, cartridges, and other metal items, are scattered across the site. One historic item, a cast metal pole-top threaded insulator pin, embossed with an unintelligible 0.4-inch plaque, was collected for curation. All historic artifacts fit within the timeframe for the operation of the Buena Suerte flotation mill and occupation of the associated Buena Suerte settlement from around 1939 to 1944.

Significance: As part of the Buena Suerte mill and settlement (41PS1102), the historic component of 41PS36 has moderately high research value, and the site meets Criteria 3 and 5 for designation as an official State Antiquities Landmark.

Recommendations: During the 2009 investigation, site 41PS36 and the associated Buena Suerte cinnabar flotation mill and settlement were thoroughly documented through survey, artifact recovery, and detailed plans of the site and individual features. The site, which is within view of Fresno Canyon and the present trail, should be monitored on at least a quarterly basis. If needed, the frequency of monitor-

ing should be increased. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

***41PS38 (Crawford-Smith Ranch)***

Site Type: Site 41PS38 is an early twentieth century ranchstead, wax plant, and livestock handling complex, as well as an open campsite of unknown prehistoric age.

Site Area: The site measures 300 meters north-south by 170 meters east-west, encompassing 12.58 acres.

Landform: Site 41PS38 is located on an alluvial terrace along the east bank of Fresno Creek, and extends onto a low hill to the east. A spring in a tributary canyon west of Fresno Creek was the water source for the Crawford-Smith Ranch complex.

Soil Type: The site is situated within an area of soils identified as 90 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded, and 10 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS38 is 3,210 to 3,240 feet AMSL.

Vegetation: Vegetation is dominated by creosote, mesquite, and prickly pear; cottonwoods grow along Fresno Creek. Surface visibility is 80 percent.

Disturbance: Over the years that the Crawford-Smith Ranch was occupied (1915–1970s), older structures were altered and repurposed. Since the 1970s, woody shrubs have invaded the site, and structures/ruins have deteriorated. The site remains about 70 percent intact.

Previous Investigation: Site 41PS38 was originally recorded by the Texas General Land Office in 1973, during an archeological survey of Chorro(b) Canyon; the site was reported by the GLO in 1975 (GLO 1975). This site was reported again in 'The Recreational Potential of Chorro Canyon, Presidio County, Texas', an unpublished MA thesis, Texas Tech University, by Michael McKann, in 1975. Site 41PS38 was also noted in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:184, 208).

Present Investigation: Site 41PS38 was investigated in 2009 and 2010. The site investigation consisted of surface inspections and the excavation of two shovel tests. In preparation for the 2010 investigation, TPWD staff from BBRSP and other state parks, the Natural Resources Program, and volunteers cleared brush away from structures at the Crawford-Smith site. While TPWD surveyors compiled a detailed map of the Crawford-Smith site using high-precision GPS equipment, archeologists from the TPWD Cultural Resources Program documented its features and searched for artifacts dating from the earliest occupations through the 1940s. Archeologists also photographed views matching historic photographs, and located where the original buildings and other cultural features once stood.

The prehistoric component of the site includes an area of midden-stained soil, while historic features include two residential ruins, two outbuildings, two additional unidentified structural ruins, one trough, one dam, three stone walls, four fences, four corrals/pens, an extensive water pipe system that extends from Smith Spring across the Crawford-Smith Ranch complex, a set of 36 piers arrayed in four rows of nine piers each, two retaining walls, two piles of rocks or concrete rubble, a pylon and guy posts, two rock-faced platforms, one wood post, one dipping trough, one car chassis, and one concrete box. Historic artifacts are scattered across the site, while a sparse scatter of

prehistoric items is concentrated around an area of midden-stained soil in the west-central part of the site. Based on the results of the shovel tests at 41PS38, archeological deposits extend to a depth of at least 90 centimeters in some parts of the site.

Archival research indicates that as early as 1904, Seferino Madrid diverted water from Fresno Creek in the present location for small-scale irrigation of the terrace. In 1914 or 1915, deed records state that O. M. Connet and/or J. J. Allen built a large wood-frame house, a shearing shed, and stock pens on the property, and had four acres under irrigation. The main road from the Terlingua cinnabar mines to Marfa ran up Fresno Canyon and across the site, which was likely a stopping point for many travelers.

By 1916, J. L. Crawford had established a ranch covering 15 square miles in this area and settled his family at the site. Historic photographs show the adobe home he built near a complex of pens and irrigated fields; another field and a few small buildings (possibly houses for workers) were on a smaller terrace nearby. Crawford made improvements to the water distribution system that brought spring water to the complex, and raised Angora goats to produce mohair.

Crawford also partnered with son-in-law J. J. Allen to establish the Fresno Wax Factory, first located on the ranch near the present Crawford-Smith Ranch complex and later moved five miles down Fresno Creek. From around 1914 through 1921, candelilla plants were gathered from the surrounding area and wax was rendered from them and sold.

Harris Smith bought the ranch from Crawford's descendants in 1930, five years after that patriarch passed away. Smith expanded and modified the adobe house to accommodate his growing family, and built or modified several other buildings. He made substantial improvements to the system of pipes that distributed spring water throughout the complex, irrigating an orchard of fruit trees and gardens outlined by rock walls, and supplying water to the house for indoor plumbing. The Smith family's primary income came from raising Angora goats and selling their mohair.

Smith also was aware of the cinnabar mines in nearby Terlingua, and hoped to discover the valuable ore on his ranch. In 1935, his herdsman Martín Bernal reported that goats grazing in a certain valley had red-stained bellies after a summer shower. Smith prospected there for cinnabar, assisted by business partner Homer Wilson, a local petroleum and mining engineer. Within a few years Smith and Wilson established the Contrabando Dome and Fresno Mines and founded the associated community of Buena Suerte (Good Luck), located just upstream from the old wax factory. To obtain mercury from the cinnabar they initially separated the ore in a flotation mill, operated by piping water from a spring one mile upstream. By 1940, Smith moved his family to Buena Suerte and leased his ranch; after the mine closed in 1944, he sold the ranch and left the area.

The Crawford-Smith site was intermittently occupied through the 1970s by other individuals, the last known being the Palma family. The fruit trees that Smith had planted eventually died from lack of water. The pens were modified to contain cattle by enlarging them and strengthening their fences. Over the years, the original iron pipes that brought water from the spring were repaired with galvanized fittings and spliced with polypropylene pipe. When the site finally was abandoned, its buildings began to deteriorate, a process hastened when cottonwood vegas (roof beams) were scavenged from the main structure in the late 1970s or early 1980s. Thorny shrubs eventually invaded the area and grew thick around the old buildings and pens.

Artifacts: The Smith family daughters apparently collected some projectile points from the site area when they lived on the property, between 1930 and 1940; however, the points have since been lost and the point types are unknown. Other prehistoric artifacts observed on the site include chipped stone debitage (some utilized), manos, and firecracked rocks. Historic items recovered for curation during the 2009 and 2010 investigations are one Incaware ceramic cup with 'Shenango China New Castle, PA USA' maker's mark, two aqua glass bottles (1820–1915) and two aqua glass bottle fragments, one amber glass jar with a screw top, one ferrous metal spring trap, one ferrous valve wrench, one ferrous pipe section, one ferrous pipe fitting, one post-1950 folded seam tin can (Type 20 solder-dot milk can), one post-1894 ferrous can with punched holes, two 1870–1930s enamel on ferrous pans (graniteware), and one machine-stamped and crimp-formed ferrous fry pan. Historic artifacts that were observed, but not recovered from 41PS38 include cartridges, nails, other metal artifacts, and an 1830–1930s yellow ware sherd with white and brown annular decoration. A wood and metal artifact measuring 35.5 inches long was collected but has not been relocated.

Significance: This site has moderately high research potential, and is recommended for designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information) and Criterion 5 (susceptibility to vandalism).

Recommendations: Quarterly monitoring and continued brush removal should be conducted at 41PS38. In addition, the site should be nominated as an official State Antiquities Landmark. Interpretive signage, including a stewardship message, has already been installed at this site.

***41PS39***

Site Type: Site 41PS39 is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures 300 meters northeast-southwest by 110 meters northwest-southeast, encompassing 8.1 acres.

Landform: Site 41PS39 is situated on an upland ridge that overlooks the east bank of Fresno Creek.

Soil Type: The site is situated in an area of soils identified by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range of 41PS39 is 3,280 to 3,360 feet AMSL.

Vegetation: The site area is sparsely vegetated with mixed grasses, cacti, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: Site 41PS39 has been minimally impacted by sheet erosion and animal trampling, and remains approximately 90 percent intact.

Previous Investigation: This site was originally recorded by William Hudson in 1975 during the Fresno Canyon Natural Area Survey (Hudson 1976b:125,138).

Present Investigation: This site was re-recorded in 2009. Cultural evidence at 41PS39 consists solely of a large scatter of lithic items that are representative of a resource procurement site. Based on the nature of the landform, cultural material at this site appears to be limited to the ground surface.

Artifacts: Artifacts observed at 41PS39 are limited to tested rhyolite cobbles and primary flakes.

Significance: This site has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS39.

***41PS162***

Site Type: Site 41PS162 is an open campsite of unknown prehistoric age and an early twentieth century artifact scatter.

Site Area: The site measures 120 meters east-west by 70 meters north-south, encompassing 2.1 acres.

Landform: Site 41PS162 is situated on an alluvial terrace overlooking the east bank of Fresno Creek.

Soil Type: The site is situated within an area of soils identified as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range of 41PS162 is 3,200 to 3,240 feet AMSL.

Vegetation: The site area is mostly open, with occasional creosote and mesquite. Surface visibility is 90 percent.

Disturbance: Site 41PS162 has been impacted by severe erosion along washes, and the previous placement of the historic Marfa-Lajitas Road (present trail) and another former road segment through the northern part of the site. The existing road, which bisects a burned rock midden on the site, had been recently maintained and bladed at the time of the 2009 investigation. The site is approximately 50 percent intact.

Previous Investigation: This site was originally recorded by William Hudson in 1975 during the Fresno Canyon Natural Area Survey (Hudson 1976b:125,138).

Present Investigation: This site was re-recorded in 2009. Cultural features documented at 41PS162 are two hearths, two burned rock scatters, one burned rock midden, and an old road bed. As noted, the burned rock midden was partially destroyed during the construction and more recent maintenance of the Marfa-Lajitas Road, which now functions as part of the Fresno Canyon Trail. The two hearths have been partially destroyed by a drainage which has cut into both features. The site also includes a large lithic scatter and a smaller scatter of historic items. Based on observations of area cutbanks and road cut, cultural deposits at this site appear to extend down less than 30 centimeters below surface.

Artifacts: Prehistoric artifacts noted at 41PS162 include chipped stone debitage, cores, bifaces, manos, and firecracked rocks; no temporally diagnostic items were observed. Historic artifacts include tin cans, solarized purple glass, and porcelain sherds with red and green decoration, all of which appeared to date to the early twentieth century.

Significance: This site has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further road blading should be conducted on the stretch of existing road/trail that extends through 41PS162. Furthermore, that portion of road that cuts through the burned rock midden at this site should be capped with caliche or other non-petroleum based material.

***41PS163***

Site Type: Site 41PS163 is an open campsite and boulder shelter with Late Prehistoric and historic twentieth century components.

Site Area: The site measures 480 meters northwest-southeast by 300 meters east-west, encompassing 35.6 acres.

Landform: Site 41PS163 is situated on a series of T1–T3 terraces along the east and west sides of Fresno Creek, and on the creek bottom.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 70 percent Geefour silty clays complex, 10 to 45 percent slopes, 20 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded, and 10 percent Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS163 is 3,080 to 3,120 feet AMSL.

Vegetation: Vegetation at this site is sparse on the upper terraces and thick along the lower terraces, and consists of mixed grasses, cacti, succulents, woody shrubs, and trees. Surface visibility is 90 percent.

Disturbance: This site has been impacted by moderate sheet erosion across the upper terraces, and occasional flooding on the lower terraces. Other impacts include animal burrowing and trampling, and recent ATV use across the site. An existing road (present trail) crosses the western part of the site. Nonetheless, the site remains approximately 70 percent intact.

Previous Investigation: This site was originally recorded by William Hudson in 1975 during the Fresno Canyon Natural Area Survey (Hudson 1976b:125,138).

Present Investigation: Site 41PS163 was re-recorded in 2009. This site is extensive and includes both prehistoric and historic components. Among the features recorded on the site are five burned rock scatters, one burned rock midden, one tipi ring, 71 bedrock mortars and metates, one rockshelter, and one boulder shelter with associated talus deposits. The boulder shelter includes two rock walls that were probably constructed by a sheep herder sometime in the late nineteenth or early twentieth century. Other features include a boulder with a cross etched onto it, also dating to the historic period. The associated artifact scatter varies in intensity across the site. Based on observations of area cutbanks and the burned rock midden at 41PS163, the maximum thickness of cultural deposits at this site is estimated to be approximately 50 centimeters.

Artifacts: Prehistoric artifacts observed at 41PS163 include chipped stone debitage, cores, bifaces, scrapers, utilized flakes, two portable metates, and firecracked rocks. In addition, one Late Prehistoric Scallorn arrow point fragment was recovered from the site for curation. One small lever padlock, with no identifiable markings, was also recovered for curation. No additional historic artifacts were noted.

Significance: This site has moderately high research potential and merits designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: At a minimum, 41PS163 should be monitored on a quarterly basis. The monitoring schedule may be adjusted, as warranted by park visitation and use of the Fresno Canyon Trail. In addition, this site should be nominated for designation as an official State Antiquities Landmark.

***41PS164***

Site Type: Site 41PS164 includes a series of Late Prehistoric rockshelter habitations and open campsites, and a twentieth century herding complex.

Site Area: The site measures 280 meters north/northwest-south/southeast by 120 meters east-west, encompassing 8.3 acres.

Landform: Site 41PS164 is situated on an upland toeslope, fans, and terrace above the east side of Fresno Creek.

Soil Type: Soils within the site area have been identified by the NRCS as Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS164 is 3,040 to 3,160 feet AMSL.

Vegetation: Vegetation at this site is sparse, and consists primarily of woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by moderate erosion, animal burrowing and trampling, possible surface collecting of artifacts, and graffiti in the rockshelter. The site remains approximately 70 percent intact.

Previous Investigation: This site was originally recorded by William Hudson in 1975 during the Fresno Canyon Natural Area Survey (Hudson 1976b:125–126,138).

Present Investigation: This site was re-recorded in 2009. Site 41PS164 is an extensive site with prehistoric and historic components. Among the features on the site are two rockshelters and three boulder shelter habitations. The shelters include both prehistoric and historic components. Two of the shelters include associated talus deposits. In addition to the shelters, other prehistoric features at 41PS164 include one hearth, one rock cairns, and one bedrock mortar. Historic features include one possible chiquera, and smooth wire fencing. A '1935' date observed by Hudson in one of the shelters in 1975 was not relocated during the present investigation, but other graffiti was noted in two shelters. At least some of this graffiti dates to 1923. Also, red splotches that were observed in three of the shelters at 41PS164 by Hudson in 1975 appear to be part of the natural color of the rock. No rock imagery was identified at the site during the 2009 investigation. A large scatter of lithics and historic artifacts connect the cultural features at this site. Based on observations of the talus deposits at 41PS164, the maximum thickness of cultural deposits at this site is estimated to be approximately 50 centimeters

Artifacts: Prehistoric artifacts observed at 41PS164 include chipped stone debitage, cores, bifaces, scrapers, manos, one portable metate, and firecracked rocks. In addition, one Late Prehistoric Perdiz arrow point fragment was recovered from the site for curation. Numerous historic artifacts were also noted, including aqua and brown bottle glass, tin cans, clear glass fragments, wire nails, milled boards, barbed wire, mesh fence wire, tin triangles with nail holes, a cast iron Dutch oven lid, and more. Most of the items are concentrated in and around the shelters.

Significance: This site has moderately high research potential, and merits designation as an official State Antiquities Landmark under Criteria 1 and 5.

Recommendations: At a minimum, 41PS164 should be monitored on a quarterly basis. The monitoring schedule may be adjusted, as warranted by park visitation and use of the Fresno Canyon Trail. In addition, this site should be nominated for designation as an official State Antiquities Landmark.

***41PS166***

Site Type: Site 41PS166 is a Late Prehistoric open campsite.

Site Area: The site measures 250 meters east-west by 80 meters north-south, encompassing 4.9 acres.

Landform: Site 41PS166 is situated on an alluvial terrace at the confluence of Arroyo Primero and Fresno Creek.

Soil Type: The NRCS has identified soils in the site area as 80 percent Riverwash and Pantera

soils, 0 to 2 percent slopes, frequently flooded, and 20 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS166 is 3,000 feet AMSL.

Vegetation: A sparse cover of creosote, mesquite, yucca, prickly pear, and acacia is present across the site, providing 90 percent surface visibility.

Disturbance: Site 41PS166 has been impacted by sheetwash erosion, animal trampling, and possible surface collecting. In addition, the historic Marfa-Lajitas Road (present trail) crosses the eastern portion of this site. This road had been recently bladed at the time of the survey. The site is approximately 60 percent intact.

Previous Investigation: This site was originally recorded by William Hudson in 1975 during the Fresno Canyon Natural Area Survey (Hudson 1976b:138).

Present Investigation: This site was re-recorded in 2009. Cultural features documented at 41PS166 consist of one hearth, two burned rock scatters, four burned rock middens, one ring midden, and one rock cairn. The site also includes an extensive lithic scatter. Based on the nature of the landform in the site area, cultural deposits could extend down to at least 1 meter below the ground surface.

Artifacts: Artifacts noted at 41PS166 include chipped stone debitage, cores, knives, scrapers, drills, ground stone artifacts, firecracked rocks, and one Late Prehistoric Perdiz arrow point fragment (collected).

Significance: This site has moderately high research potential, and merits designation as an official State Antiquities Landmark under Criteria 1 and 5.

Recommendations: Initially, site 41PS166 should be monitored on a quarterly basis. However, this monitoring schedule may eventually be adjusted, as warranted by park visitation and use of the Fresno Canyon Trail. In addition, this site should be nominated for designation as an official State Antiquities Landmark.

***41PS471 (Fresno Wax Factory)***

Site Type: Site 41PS471 is the location of a historic wax factory and settlement. The factory was in operation between 1914 and 1921. However, the site was occupied between at least 1903 and the 1940s. A prehistoric artifact scatter also indicates a Middle Archaic occupation

Site Area: The site measures 300 meters north-south by 280 meters east-west, encompassing 20.74 acres.

Landform: Site 41PS471 is centered on Fresno Creek, and includes terraces on the southeast and northwest sides of the creek. Most cultural features are on the southeast side of the creek, where the terrace is bounded on the south and east by a deep drainage. A prominent scarp on the southeast terrace divides it into upper and lower levels.

Soil Type: Soils in the site area have been identified as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range at 41PS471 is 2,750 to 2,760 feet AMSL.

Vegetation: The site has a moderately dense cover of woody shrubs, cacti, and succulents, with a few large cottonwood trees along Fresno Creek. Surface visibility is 80 percent.

Disturbance: Site 41PS471 has been impacted by minor erosion and animal burrowing. The rock ruins at the site show slightly more deteri-

oration than when they were originally recorded in 1989. The site remains approximately 80 percent intact.

Previous Investigation: This site was originally documented in 'The Recreational Potential of Chorro Canyon, Presidio County, Texas', an unpublished MA thesis, Texas Tech University, by Michael McKann, in 1975. Site 41PS471 was formally recorded in 1989, and was included in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:184, 208).

Present Investigation: Site 41PS471 was re-recorded in 2009. Numerous historic cultural features were identified on the site, including six masonry structure ruins, five foundations (one melted adobe, one gravel, one stone, one boulders, and one concrete), two livestock pens (one stone, one post and barbed wire), one pit, two riveted iron boilers, three boulder clusters, and two stone circles on the east side of Fresno Creek, and a stone firepit for candelilla processing, two boulder clusters, and a cemetery consisting of nine rock mound graves on the west side of Fresno Creek. Numerous historic artifacts were found in association with these features. In addition, a sparse scatter of prehistoric artifacts was evident across both sides of the creek. In February 2010, a follow-up investigation was conducted at 41PS471, during which time a detailed map of the site was produced. Based on the estimated depth of historic artifacts in terrace sediments at 41PS471, the thickness of the archeological deposits at the site is thought to be approximately 30 centimeters.

The first known historic occupation at 41PS471 is indicated by the presence of three structures at this location on a 1903 map, labeled Alamo Ranch. The Fresno Wax Factory was established in the vicinity in 1914 by J. L. Crawford and Jack Allen, and was moved to the 41PS471 site location shortly thereafter. The Wax Factory apparently closed about 1921. When the Buena Suerte Flotation Mill (41PS1102) was established nearby in 1939, the stone structures on 41PS471 appear to have been reoccupied, as indicated by the presence of artifacts from the 1940s in these structures, some items of which are related to mining. Though the structures associated with the Fresno Wax Factory are now mostly gone, their locations were determined via the archeological evidence and a 1917 photograph by W. D. Smithers of the facility while it was still in operation.

Artifacts: Historic artifacts recovered from 41PS471 include one post-1930s clear glass bottle, three fragments of an embossed milk glass saucer, an 1890–1900s molded amber glass Czech dog charm, a possible ferrous metal lantern handle cover, a silver plated spoon with floral design, a post-1898 carbide lamp reflector with striker assembly, an 1870–1930s blue enamelware bowl, two post-1898 ferrous 'Union Carbide Co' lids, one ferrous espumador and wooden handle fragment, and one post-1913 30.06 shell cartridge with 'FA 12 13' headstamp. In addition, an untyped dart point fragment was recovered. Other prehistoric artifacts observed, but not removed, from the site include a sparse scatter of chipped stone debitage and bifaces. A portable metate was noted in the corner of a historic candelilla firepit.

Significance: Site 41PS471 has a moderately high research value, based on the important role that candelilla wax processing and cinnabar mining played in regional history, and the fact that J. L. Crawford and Jack Allen were early settlers in the Fresno Canyon area. The site was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: In 2009 and 2010, the Fresno Wax Factory site was thoroughly surveyed, diagnostic artifacts were recovered and

detailed plans of the site and individual features were produced. The site, which is partially within view of the existing Lower Fresno Canyon Trail, should be monitored on at least a quarterly basis. If needed, the frequency of monitoring should be increased. The site should be considered for interpretation, either within trail brochures or with signage.

***41PS472 (part of 41PS1102, Buena Suerte cinnabar mill and settlement)***

Site Type: Site 41PS472 is a multi-component site, with an open campsite of unknown prehistoric age and a historic component associated with operation of the Buena Suerte cinnabar flotation mill in operation between 1939 and 1944 (41PS1102).

Site Area: The site measures 350 meters northeast-southwest by 170 meters east-west, encompassing 14.7 acres.

Landform: Site 41PS472 is situated on a high terrace adjoining Fresno Creek.

Soil Type: Soils in the site area have been identified by the NRCS as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range at 41PS472 is 2,760 to 2,790 feet AMSL.

Vegetation: Vegetation is sparse and includes woody shrubs, cacti, and succulents. Surface visibility is 80 percent.

Disturbance: Site 41PS472 has been impacted by erosion, animal burrowing and trampling, construction of existing roads, and minor bulldozing adjacent to the roads. Nonetheless, the site remains approximately 80 percent intact.

Previous Investigation: This site was originally recorded in 1989 by Mike Davis, William A. Cloud, Bruce Nightengale, J. David Ing, and Dave Dibble, Jr., during an archeological reconnaissance of what was then Big Bend Ranch State Natural Area. The site is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:215).

Present Investigation: Site 41PS472 was re-recorded in 2009. Prehistoric features at this site consist of two burned rock scatters, one crescent midden, and one boulder mortar. A lithic scatter is associated with these features. Historic features recorded at 41PS472 consist of four historic hearths, three dumps, one adobe ruin foundation (rock), and two abandoned roads. Numerous historic artifacts were found in association with the historic features. Most of these artifacts date to the 1939–1944 operation of the Buena Suerte cinnabar flotation mill and occupation of the Buena Suerte settlement (including 41PS36 and 41PS1102). A few artifacts are somewhat more recent, perhaps attributable to the later operation of the nearby Whit-Roy Mine. Based on the apparent thickness of the prehistoric crescent midden at 41PS472, the maximum thickness of the cultural deposit at this site is estimated to be 20 centimeters.

Artifacts: Prehistoric artifacts documented at 41PS472 include chipped stone debitage, cores, bifaces, and firecracked rocks. No temporally diagnostic prehistoric artifacts were observed. Historic artifacts observed include hole-in-top tin cans, clear, green, brown, and cobalt blue bottle glass, decal-decorated whiteware, whiteware with an annular gold rim, Fiestaware, a lard bucket, a tin lid to a tobacco can, pipe, bricks, and other items. As noted, most of these items fit within the timeframe for the operation of the Buena Suerte flotation mill and occupation of the associated Buena Suerte settlement (approximately 1939–1944).

Significance: Site 41PS472 has moderately high research value, and was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: The Buena Suerte cinnabar flotation mill and settlement sites, of which 41PS472 is a part, have been thoroughly surveyed, diagnostic artifacts recovered, and detailed plans of the site and individual features produced during the present investigation. The site, which is within view of Fresno Canyon and the present trail, should be monitored on at least a quarterly basis. If needed, the frequency of monitoring should be increased. No further work is recommended at 41PS472 at this time.

***41PS1077 (Linda Walker)***

Site Type: Site 41PS1077 is an open campsite of unknown prehistoric age, and an early twentieth century ranching/herding component.

Site Area: The site measures 250 meters northeast-southwest by 140 meters northwest-southeast, encompassing 8.6 acres.

Landform: This site is located on a ridge and terrace along the west bank of Fresno Creek.

Soil Type: Natural Resources Conservation Service soil maps identify the soil unit at 41PS1077 as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range of this site is 3,000 to 3,160 feet AMSL.

Vegetation: Vegetation at 41PS1077 is sparse, and includes mixed grasses, cacti, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: Site 41PS1077 has been impacted by moderate erosion, the overprinting of an early twentieth century ranching component, and the presence of a contemporary cabin on the north end of the site. The site is about 50 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009. The prehistoric component of 41PS1077 consists of four hearths, one burned rock scatter, and an associated lithic scatter. The prehistoric component was impacted by a historic twentieth century ranching component, as well as a more modern cabin. The ranching component consists of 10 or 11 rows of smooth wire that have been anchored with rocks. These wires are presumed to have been used as animal 'hitches'. A few historic artifacts were also found on the site. The presence of bedrock on the site suggests that the cultural deposits at 41PS1077 are no more than about 5 centimeters in thickness.

Artifacts: Prehistoric artifacts observed at this site include chipped stone debitage, cores, bifaces, and manos. One non-diagnostic dart or arrow point fragment was also noted but not collected. Historic items are limited to tin cans and smooth wire.

Significance: This site has moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1077.

***41PS1078***

Site Type: Site 41PS1078 is an open campsite of unknown prehistoric age.

Site Area: The site measures 110 meters northwest-southeast by 20 meters east-west, encompassing 0.54 acre.

Landform: Site 41PS1078 is situated on a high bench overlooking the east bank of Fresno Creek, opposite the confluence of Fresno Creek and Arroyo Primero.

Soil Type: The NRCS has identified soils in the site area as Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1078 is 3,000 to 3,400 feet AMSL.

Vegetation: A sparse cover of woody shrubs and cacti is present across the site, providing 90 percent surface visibility.

Disturbance: Moderate erosion was evident at 41PS1078 along Fresno Creek, but the site remains approximately 80 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009. Site 41PS1078 consists of a single dispersed hearth (1.6 meter diameter) and associated lithic scatter. Lithic material was procured from an on-site outcrop of Jeff Conglomerate. Based on the absence of soils on the landform upon which 41PS1078 is located, cultural material at this site is limited to the ground surface.

Artifacts: Artifacts noted at 41PS1078 include chipped stone debitage, cores, and bifaces. No temporally diagnostic artifacts were observed.

Significance: This site has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1078.

***41PS1079***

Site Type: Site 41PS1079 is an open campsite of unknown prehistoric age.

Site Area: The site measures 230 meters northwest-southeast by 70 meters east-west, encompassing four acres.

Landform: Site 41PS1079 is situated on a low terrace overlooking the east bank of Fresno Creek, across the drainage and a short distance southeast of the confluence of Fresno Creek and Arroyo Primero. A narrow ridge forms the eastern boundary of the site.

Soil Type: The NRCS has identified soils in the site area as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of 41PS1079 is 3,000 feet AMSL.

Vegetation: Vegetation on the site consists of a sparse cover of mixed grasses, cacti, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: The site has been impacted by erosion and animal burrowing and trampling, but remains approximately 80 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1079 was recorded in 2009. The site consists of three hearths, two burned rock middens, and two burned rock scatters. The highest concentration of features and artifacts is at the northwest end of the site. The amount of material decreases as one moves southeast across the site. Based on the relief of the burned rock middens, the thickness of the cultural deposit at 41PS1079 is less than 10 centimeters.

Artifacts: Artifacts noted at 41PS1079 include chipped stone debitage, cores, and bifaces. No temporally diagnostic artifacts were observed.

Significance: Due to the lack of deposition and intact features at 41PS1079, and the absence of temporally diagnostic artifacts, the site is

considered to have moderately low research value. The site does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1079.

***41PS1080***

Site Type: Site 41PS1080 is an open campsite of unknown prehistoric age, and a historic artifact scatter.

Site Area: The site measures 90 meters northwest-southeast by 50 meters northeast-southwest, encompassing 1.1 acres.

Landform: Site 41PS1080 is situated on a high terrace overlooking the west bank of Fresno Creek.

Soil Type: The NRCS has identified soils in the site area as Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1080 is 2,920 to 2,960 feet AMSL.

Vegetation: Vegetation on the site consists of a sparse cover of woody shrubs. Surface visibility is 90 percent.

Disturbance: Site 41PS1080 has been impacted by moderate erosion, and remains approximately 70 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009. The prehistoric component at 41PS1080 consists of four hearths and a sparse lithic scatter; the historic component consists of a scatter of twentieth century artifacts that are likely associated with the Marfa-Lajitas Road that runs adjacent to the site. Except for the road, no other historic features were observed in the area. Based on the thin soils in the area and the presence of cultural features on the ground surface, the thickness of the cultural deposit at 41PS1080 is estimated to be less than 10 centimeters.

Artifacts: Prehistoric artifacts documented at this site are chipped stone debitage, cores, bifaces, and firecracked rocks. Historic items include tin cans and a cartridge with a '5 11 F A' headstamp.

Significance: Site 41PS1080 has low research potential and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1080.

***41PS1081***

Site Type: Site 41PS1081 is a Late Prehistoric open campsite.

Site Area: The site measures 210 meters northwest-southeast by 110 meters east-west, encompassing 5.7 acres.

Landform: Site 41PS1081 is situated on upper and lower terraces overlooking the west bank of Fresno Creek.

Soil Type: The NRCS has identified soils in the site area as 70 percent Corazones-Ojinaga complex, 1 to 12 percent slopes and 30 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range at 41PS1081 is 2,890 to 2,920 feet AMSL.

Vegetation: Vegetation on the site consists primarily of a sparse cover of woody shrubs across the upper terrace, while the lower terrace is covered with woody shrubs and trees. Vegetation is thicker along the creek bank. Surface visibility is 80 percent.

Disturbance: The creek bank along the lower terrace at 41PS1081 was actively eroding; however, the site remains approximately 70 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009. Cultural features on the site consist of 15 hearths, six burned rock scatters, and one lithic concentration. Two additional hearths on the site may be modern. Based on area cutbank observations, the thickness of the cultural deposit at 41PS1081 is approximately five centimeters.

Artifacts: Artifacts observed at 41PS1081 include chipped stone debitage, cores, bifaces, manos, two portable metates, and firecracked rocks. In addition, one Late Prehistoric Cliffton arrow point/Perdiz arrow point preform was recovered from the site for curation.

Significance: The lower terrace at this site retains moderately high research value, but the site does not meet criteria for designation as an official State Archeological Landmark.

Recommendations: No further work is recommended at 41PS1081.

***41PS1082***

Site Type: Site 41PS1082 is an open campsite of unknown prehistoric age, and a historic twentieth century artifact scatter.

Site Area: The site measures 210 meters northwest-southeast by 140 meters east-west, encompassing 7.2 acres.

Landform: Site 41PS1082 is situated on an upper terrace and an upland toeslope overlooking the west bank of Fresno Creek. An unnamed arroyo is immediately north of the site.

Soil Type: Soils in the site area have been mapped by the NRCS as Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1082 is 2,880 to 2,900 feet AMSL.

Vegetation: Vegetation on the site consists of a very dense cover of cacti, woody shrubs, and trees across the terrace, while the upper toeslope is more open. Surface visibility is 40 to 90 percent across the site.

Disturbance: Moderate erosion was evident at 41PS1082 in 2009. The site remains 80 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009 Cultural features on the site consist of two hearths, four burned rock scatters, and one possible ring midden. In addition, gray midden soil was evident on the terrace. The artifact assemblage at 41PS1082 includes a prehistoric lithic scatter, as well as a number of historic items. The historic artifacts may be associated with the historic Marfa-Lajitas Road that borders the western edge of the site. Based on the apparent thickness of gray midden soils on the terrace, the thickness of the cultural deposit at this site is at least 10 centimeters.

Artifacts: Artifacts observed at 41PS1082 include chipped stone debitage, cores, bifaces, and scrapers, as well as historic cans (including a Prince Albert can), aqua, solarized, and brown bottle glass, one yellow ware ceramic sherd, and one 'REM–UMC .45 Colt' cartridge. No prehistoric diagnostic artifacts were identified.

Significance: The prehistoric component of this site has moderately high research value, and is recommended for nomination as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information).

Recommendations: Site 41PS1082 should be monitored on an annual basis, and should be nominated for designation as an official State Antiquities Landmark.

***41PS1083***

Site Type: Site 41PS1083 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 130 meters northwest-southeast by 30 meters northeast-southwest, encompassing 0.96 acre.

Landform: Site 41PS1083 is situated on a high terrace on the west bank of Fresno Creek.

Soil Type: The NRCS has identified soils in the site area as Corazones-Ojinaga complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1083 is 2,800 to 2,840 feet AMSL.

Vegetation: Vegetation on the site consists of a sparse cover of woody shrubs, cacti, and mixed grasses. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, and the construction of an existing ranch road (i.e., present trail) through the site. The site is approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009. The site consists of a moderately dense lithic scatter. No cultural features were observed. Based on the nature of the thin soils in this area, the thickness of the cultural deposit at 41PS1083 is estimated to be no more than 10 centimeters.

Artifacts: Artifacts observed at 41PS1083 include chipped stone debitage, cores, bifaces, scrapers, and one spokeshave.

Significance: This site has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1083.

***41PS1084***

Site Type: Site 41PS1084 is a Middle Archaic open campsite and lithic procurement site, and historic twentieth century rock features.

Site Area: The site measures 490 meters northwest-southeast by 190 meters northeast-southwest, encompassing 23 acres.

Landform: Site 41PS1084 is situated on a high alluvial terrace overlooking Fresno Creek to the south and an unnamed arroyo to the east.

Soil Type: Soils in the site area have been identified as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range at 41PS1084 is 2,800 to 2,840 feet AMSL.

Vegetation: Vegetation on the site consists primarily of creosote, ocotillo, and candelilla. Surface visibility is 60 percent.

Disturbance: This site is being impacted by moderate sheetwash and rill erosion, animal burrowing, and deterioration of the cultural features. The site remains approximately 60 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009 and 2010. Cultural features documented on the site consist of three prehistoric hearths (one dispersed), two burned rock scatters, one historic hearth, and two historic rock cairns at the far west end of the site, and six burned

rock scatters and a slab metate near the east end of the site. A lithic scatter connects the two areas of the site. In addition, a historic water pipeline system associated with the Buena Suerte Mill (41PS1102) crosses 41PS1084, running parallel to Fresno Creek. Based on observations of area animal burrows and erosional gullies, the thickness of the cultural deposit at 41PS1084 is estimated to be 10 centimeters.

Artifacts: Artifacts noted at 41PS1084 include chipped stone debitage, cores, bifaces, manos, two metates, and firecracked rocks. In addition, two Middle Archaic Almagre dart points, and one Middle Archaic Langtry dart point were recovered from the site for curation.

Significance: This site has moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1084.

***41PS1085***

Site Type: Site 41PS1085 is an open campsite of unknown prehistoric age.

Site Area: The site measures 180 meters southwest-northeast by 70 meters north-south, encompassing 3.1 acres.

Landform: Site 41PS1085 is situated on an upland summit, which is bounded by two small intermittent drainages.

Soil Type: Soils within the site area have been identified by the NRCS as Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1085 is 2,640 to 2,656 feet AMSL.

Vegetation: Vegetation is sparse across the site and consists mostly of creosote. Surface visibility is nearly 100 percent.

Disturbance: Site 41PS1085 has been impacted by moderate deflation, but remains approximately 80 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1085 was recorded in 2009. Cultural features on the site consist of nine hearths and two burned rock scatters. The nature of the associated lithic assemblage, including cores and initial reduction flakes, is similar to lithic procurement sites in the area, however lithic procurement sites do not typically include the types of cultural features that are present at 41PS1085. Based on the deflated nature of the landform, the thickness of the cultural deposit at 41PS1085 is less than five centimeters.

Artifacts: Artifacts noted at 41PS1085 are limited to chipped stone debitage (initial reduction flakes) and cores. No diagnostic artifacts or tools were observed.

Significance: This site has moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1085.

***41PS1086***

Site Type: Site 41PS1086 is an open campsite of unknown prehistoric age.

Site Area: The site measures 270 meters northeast-southwest by 90 meters northwest-southeast, encompassing six acres.

Landform: Site 41PS1086 is situated on a series of terraces overlooking the south bank of Fresno Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 70 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes and 30 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range at 41PS1086 is 3,160 to 3,200 feet AMSL.

Vegetation: Vegetation on the site is dense along Fresno Creek, but is increasingly sparse away from the drainage, and consists of mixed grasses, cacti, succulents, woody shrubs, and trees. Surface visibility is 60 percent.

Disturbance: The site has been impacted by erosion, surface collecting, and an existing road (present trail) across the site. The road had been recently bladed at the time of the investigation. The site remains approximately 60 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1086 was recorded in 2009. This site consists primarily of a large lithic scatter. Although burned rock was present on this site, no intact hearths or middens were identified. A single, deep bedrock mortar was noted. Based on the thin soils and bedrock exposures in the area, the thickness of the cultural deposit at this site is thought to be less than 20 centimeters.

Artifacts: Artifacts documented at 41PS1086 include chipped stone debitage, cores, bifaces, scrapers, and firecracked rocks. No temporally diagnostic artifacts were observed at the site.

Significance: This site has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1086.

***41PS1087***

Site Type: Site 41PS1087 is a lithic scatter of undetermined Archaic age, and a twentieth century habitation.

Site Area: The site measures 200 meters northwest-southeast by 40 meters northeast-southwest, encompassing two acres.

Landform: Site 41PS1087 is situated on a T1 terrace overlooking the southwest bank of Fresno Creek.

Soil Type: Soils in the site area have been identified by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1087 is 3,200 feet AMSL.

Vegetation: Vegetation on the site is light to moderate, and consists of mixed grasses, cacti, succulents, woody shrubs, and trees. Surface visibility is 80 percent.

Disturbance: The site has been impacted by erosion, animal burrowing and trampling, deterioration of the historic ruins, and likely subjected to occasional flooding. The site remains approximately 60 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1087 was recorded in 2009. The prehistoric component of this site is limited to a lithic scatter; no prehistoric cultural features were observed. Historic features recorded at 41PS1087 consist of one rock house ruin, a rock wall that may be part of a second house ruin, and fences. In addition, a moderate scatter of historic artifacts is evident across the site. Based on the thin soils in the area, and observations of the cutbank along Fresno Creek, the thickness of the cultural deposits at this site is estimated to be less than 20 centimeters.

Artifacts: Prehistoric artifacts documented at 41PS1087 include chipped stone debitage, cores, manos, two portable metates, and one untyped Archaic dart point (collected). The historic artifact assemblage includes window glass, a clear glass bottle base fragment with a maker's mark (empty diamond), solarized purple glass, undecorated whiteware, undecorated porcelain sherds, one fragment of ironstone with part of an English maker's mark, decalware, one 'CALUMET' baking powder can, one sardine can, one large round ferrous object (resembling large washer), and one rifle cartridge with 'F A 10 14' headstamp. One clear glass panel bottle was collected.

Significance: This site is associated with the Crawford-Smith Ranch (41PS38), which is located about 500 meters to the north. Laborers for the Crawford-Smith Ranch lived with their families at the 41PS1087 location. A nearby cemetery that includes six unmarked stacked rock burials is likely associated with the laborers that lived and worked in this area. These sites combined have moderately high research value, and meet State Antiquities Landmark Criteria 1, 2, 3, and 5. Site 41PS1087 is recommended for nomination as an official State Antiquities Landmark.

Recommendations: This site, as well as a nearby cemetery that is located outside the present project corridor but is probably associated with 41PS1087, should be monitored on a quarterly basis. The cemetery has been recorded with Presidio County, and has also been recorded as an archeological site. As contributing features to the nearby Crawford-Smith Ranch, and the apparent home site for laborers at the Crawford-Smith Ranch, 41PS1087 should be nominated for designation as an official State Antiquities Landmark.

***41PS1088***

Site Type: Site 41PS1088 is an open campsite of unknown prehistoric age, and a twentieth century artifact scatter.

Site Area: The site measures 130 meters northeast-southwest by 30 meters northwest-southeast, encompassing 0.96 acre.

Landform: Site 41PS1088 is situated on a T1 terrace overlooking the west bank of Fresno Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation range of 41PS1088 is 3,260 to 3,280 feet AMSL.

Vegetation: Vegetation consists of mixed grasses, cacti, succulents, and woody shrubs, increasing in density near Fresno Creek. Surface visibility is 50 percent.

Disturbance: The site has been impacted by moderate erosion (sheetwash and gullying), animal burrowing and trampling, and an existing ranch road (present trail). The road was recently bulldozed/maintained, further damaging 41PS1088. The site remains only about 40 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1088 was recorded in 2009. The prehistoric component of this site is comprised of three hearth features, one burned rock midden, and an associated lithic scatter. The historic component is limited to a sparse scatter of historic artifacts. No historic features were observed. Based on observations of an arroyo cutbank in the site area, the thickness of the cultural deposits at 41PS1088 is estimated to be less than 10 centimeters.

Artifacts: Prehistoric artifacts observed at 41PS1088 are chipped stone debitage, cores, one chopper, and firecracked rocks. No temporally diagnostic prehistoric artifacts were observed. The historic artifact assemblage includes aqua bottle glass, a tobacco tin, and a horseshoe.

Significance: This site has moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1088.

***41PS1102 (Buena Suerte cinnabar mill and settlement)***

Site Type: Site 41PS1102 is the location of a cinnabar flotation mill and settlement occupied roughly between 1939 and 1944, and a lithic scatter of unknown prehistoric age.

Site Area: The site measures 280 meters northeast-southwest by 220 meters east-west, encompassing 15.2 acres.

Landform: Site 41PS1102 is situated on a high terrace, overlooking the east bank of Fresno Creek and a small unnamed tributary of Fresno Creek.

Soil Type: The NRCS has mapped soils within the site area as 70 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded, and 30 percent Mariscal-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1102 is 2,780 to 2,840 feet AMSL.

Vegetation: Vegetation consists of a moderately dense to sparse covering of woody shrubs. Surface visibility is 70 percent.

Disturbance: Structures and materials at 41PS1102 were removed around 1944 and possibly later, after the Buena Suerte Mill was abandoned. A possible recent hearth near Fresno Creek suggests that the site is perhaps being accessed by park visitors or others. The site is approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1102 was first recorded in 2009. Historical research revealed that when cinnabar was discovered approximately one mile to the east of 41PS1102, Harris Smith and Homer Wilson established the Fresno Mine there, and built a flotation mill (this site) on the bank of Fresno Creek in 1939. Water for the mill was piped in from a spring roughly one mile upstream. The community of Buena Suerte sprang up around the mill. By 1942, cinnabar processing shifted to a rotary furnace near the mine; the Buena Suerte mill was abandoned, and most or all of the houses near it were removed (Austin 1998; Hill 1998; Smith 1944).

Numerous historic cultural features were identified on the site, including one stone masonry mill ruin, two adobe structure ruins, two building foundations (one stone and concrete perimeter beam, one concrete slab), one rock platform, one rock retaining wall, two rock alignments, one brick pile, three concrete machine bases (one inscribed MAY–7–1942), one concrete inlet, three sets of stone and concrete troughs, two pipes, two cinnabar tailings piles, two roads, four dumps, five pits, one truck body, and one rock mound. Numerous historic artifacts were found in association with these features. The prehistoric component at this site is limited to a sparse scatter of chipped stone artifacts. No diagnostic prehistoric artifacts were observed. In February 2010, a follow-up investigation was conducted at 41PS1102, during which time a detailed map

of the site was produced. Based on the height of the largest tailings pile at this site, the thickness of the cultural deposit at 41PS1102 is up to four meters.

Artifacts: Numerous domestic, industrial, and construction-related artifacts were observed at 41PS1102, and a small sampling of diagnostic domestic items were recovered for curation. The recovered artifacts are 14 red Willow transferware sherds (including two rim sherds), one yellow ware rim sherd with green glaze, two Fiesta ware sherds (one rim sherd, one base sherd) with turquoise glaze, one white earthenware sherd with edge molded decoration, one shell casing (F A 34), one green and white 'cats eye' marble, and four dry cell batteries. Among the other observed items are numerous cans and bottle glass fragments.

Significance: This site has moderately high research value, and meets Criterion 3 (presence of unique attributes) and Criterion 5 (susceptibility to vandalism) for designation as an official State Antiquities Landmark.

Recommendations: During the present investigation, the Buena Suerte mill and settlement site was thoroughly surveyed, diagnostic artifacts were recovered and detailed plans of the site and individual features were produced. The site, which is within view of Fresno Canyon and the present trail, should be monitored on at least a quarterly basis. If needed, the frequency of monitoring should be increased. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

**Pila de los Muchachos Trail**

The Pila de los Muchachos Trail utilizes 6.95 miles of existing unimproved two-track road, and extends southward from the road to Madrid Falls, past the Pila de los Muchachos primitive campsite, into Arroyo Primero, eventually connecting with the Lower Fresno Canyon Trail (Figure 26). The existing road is approximately eight feet in width.

The Pila de los Muchachos Trail corridor was surveyed February 19 – 24, 2009. A total of 287 acres were surveyed along this corridor. Investigators re-recorded four previously recorded archeological sites (41PS31, 41PS32, 41PS35, 41PS167) and eleven newly discovered sites (41PS1089-1099). Site descriptions are below and site summaries are in Appendix A. Twelve isolated finds were documented (see Appendix C).

***41PS31 (Chorroborro)***

Site Type: Site 41PS31 is a pictograph site of unknown prehistoric age.

Site Area: The rock imagery extends 20 meters across the rock face at this site, and extends as high as 2.5 meters.

Landform: Site 41PS31 is on a rock face that overlooks the west side of a steep drainage, northwest of the confluence of Chorro Canyon and Arroyo Primero.

Soil Type: This site is situated within an area of soils identified as Pantak and Lingua soils and Rock outcrop, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS31 is 3,360 to 3,370 feet AMSL.

Vegetation: The approach to the site is covered with mixed grasses, cacti, woody shrubs and trees. Trees and shrubs are thick at the cliff face, partially obscuring the pictograph panels. Surface visibility is 60 percent.

Disturbance: The rock imagery at 41PS31 is being impacted by spalling of the underlying rock and weathering of the pictographs themselves. The site is estimated to be approximately 50 percent intact.

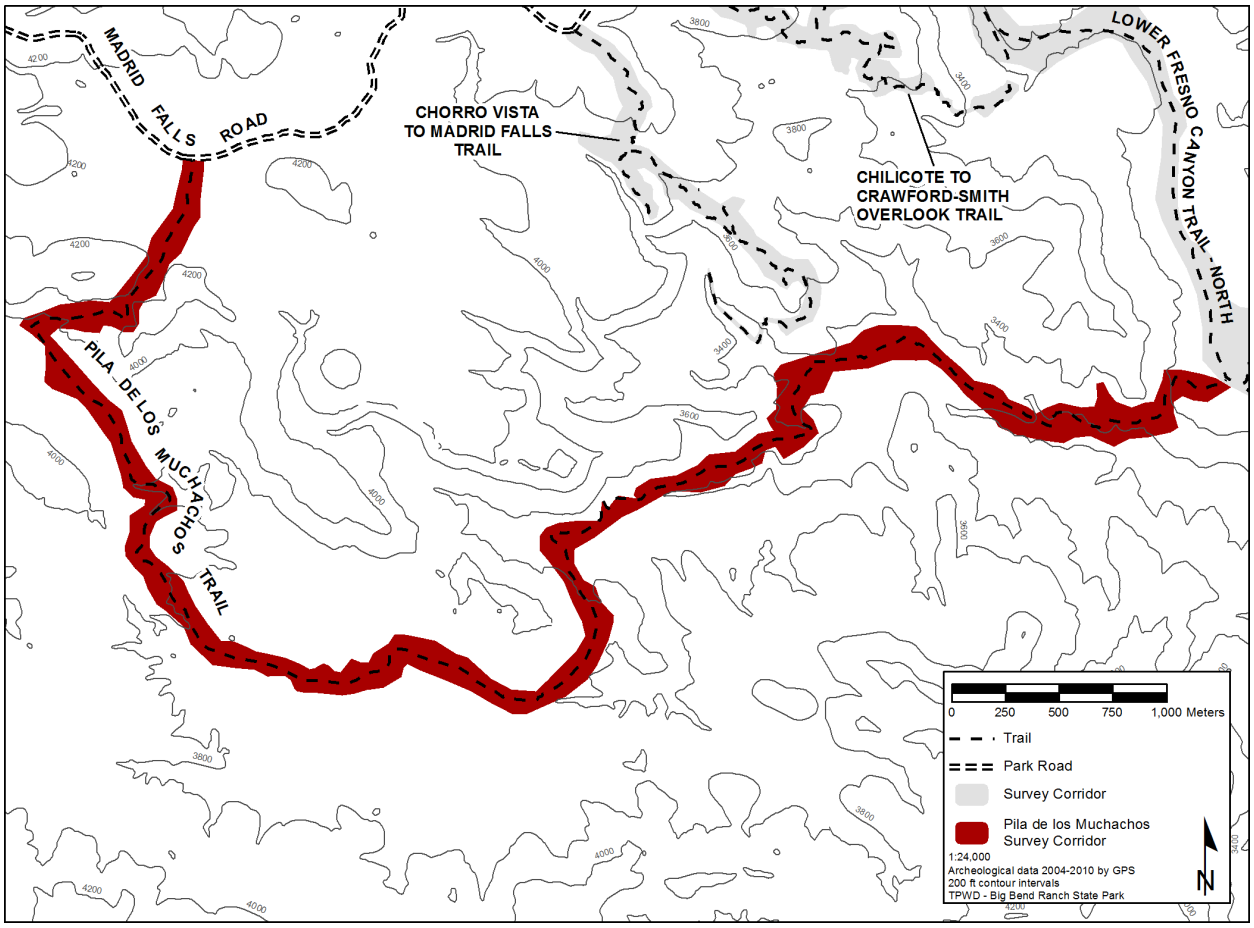


**Figure 26.** Map showing location of Pila de los Muchachos Trail.

Previous Investigation: This site was originally recorded by the Texas General Land Office in 1973, during an archeological survey of Chorro(b) Canyon (GLO 1975). The site was originally described as a rockshelter with evidence of habitation; there was no mention of rock imagery. The site revisit in 2009 found no rockshelter or evidence of habitation at the location of 41PS31, but did find pictographs at the location.

Present Investigation: Site 41PS31, or the mapped location of 41PS31, was revisited during the 2009 field season. As noted, the rockshelter originally recorded as 41PS31 was not located, but five pictograph panels were recorded in the area. The pictographs on all five panels are red monochromatic figures, and appear to represent multiple styles of imagery. No historic figures are apparent among the pictographs, suggesting that the imagery is prehistoric. No artifacts or other evidence of habitation was identified at the site.

Artifacts: No artifacts were observed at 41PS31.

Significance: Due to the apparent multiple rock imagery styles represented at 41PS31, and the relative scarcity of rock art in general within the archeological record, this site has moderately high research value. As a result, this site is recommended for designation as an official State Antiquities Landmark under Criteria 1 and 3.

Recommendations: The rock imagery at this site should be thoroughly recorded, and digital enhancements of the pictographs produced. In addition, the site should be nominated for designation as an official State Antiquities Landmark. Further, biannual monitoring of the condition of this resource is strongly recommended.

***41PS32 (Madrid House)***

Site Type: Site 41PS32 is a rockshelter habitation and open campsite of unknown prehistoric age, and a late nineteenth to early twentieth century ranchstead known as the Madrid House.

Site Area: The site measures 330 meters north-south by 190 meters east-west, encompassing 15.5 acres.

Landform: Site 41PS32 is situated on a terrace along Arroyo Primero and on an upland area to the south and east.

Soil Type: This site is situated within an area of soils identified as 80 percent Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded, and 20 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS32 is 3,320 to 3,400 feet AMSL.

Vegetation: Vegetation at this site includes a dense cover of shrubs and trees in the riparian area along Arroyo Primero, and a somewhat more sparse cover of mixed grasses, cacti, succulents, and woody shrubs away from the drainage. Surface visibility is 40 percent.

Disturbance: Site 41PS32 has been impacted by erosion, animal burrowing and trampling, surface collecting, previous construction of a road through the area, and recent bulldozing/maintenance of the road. The road now serves as the Pila de los Muchachos Trail. The site remains approximately 60 percent intact.

Previous Investigation: This site was originally recorded by the Texas General Land Office in 1973, during an archeological survey of Chorro(b) Canyon (GLO 1975). The present site was originally recorded as three different sites—41PS32, 41PS33, and 41PS34. However, it was found during the present investigation that these sites are connected by archeological deposits. As a result, all three sites were combined under the trinomial 41PS32. A history of the Madrid property is reported in Archeological Reconnaissance, Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996:196–198).

Present Investigation: Site 41PS32 was re-recorded in 2009. The prehistoric component of the site is comprised of a rockshelter habitation, as well as two burned rock scatters, two burned rock middens, and five bedrock mortars in the open area of the site. A scatter of chipped stone debitage, cores, bifaces, and firecracked rocks connect these features. The historic component of 41PS32 consists of an adobe house ruin (a portion of which was reconstructed in the early 1970s), two walls from a second adobe structure, a corral, and fences. Both the house and second structure are shown on a 1902 topographic map of the area. Numerous historic artifacts are evident in proximity to the structures. Based on the nature of the soils in the site area, and observations of the roadcut through the site, it is estimated that the thickness of the cultural deposit at 41PS32 is about 50 centimeters

Artifacts: As noted, prehistoric artifacts at this site include chipped stone debitage, cores, bifaces, and firecracked rocks. No temporally diagnostic prehistoric artifacts were found during the present investigation. Broken pro-

jectile points and a preform were reportedly recovered from 41PS32 during the 1973 investigation, but the point fragments were not identified in 2009. As a result, the age of the prehistoric component(s) is unknown. Historic items observed at 41PS32 include solarized, brown, clear, green, and dark brown bottle glass, window glass, undecorated white earthenware sherds, lead glazed earthenware, a porcelain paneled vase, two green floral transferware sherds (recovered for curation), wire nails, three cast iron stove door fragments, tin sheets, tin cans (coffee and tobacco), centerfire cartridges (one with 'REM–UMC 38 S&W SPL' headstamp, and one with no stamp), asbestos tile, the rubber sole of a shoe, and a whet stone (recovered for curation).

Significance: The overall research value of 41PS32 is moderately low, but the historic component may retain the potential to contribute important information about the late nineteenth to early twentieth century inhabitants. As a result, this site is recommended for designation as an official State Antiquities Landmark under Criterion 1 (the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information) and Criterion 5 (the high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to insure maximum legal protection, or alternatively further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected).

Recommendations: This site, which is bisected by the present trail, should be monitored on at least a quarterly basis. If needed, the frequency of monitoring should be increased. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

***41PS35***

Site Type: Site 41PS35 is an open campsite of unknown prehistoric age.

Site Area: The site measures 230 meters northwest-southeast by 140 meters northeast-southwest, encompassing 7.9 acres.

Landform: Site 41PS35 is situated on a series of three terraces on the north bank of deeply incised Arroyo Primero.

Soil Type: The Natural Resources Conservation Service has identified soils in the site area as Terlingua-Rock outcrop complex 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS35 is 3,200 to 3,270 feet AMSL.

Vegetation: Vegetation includes a sparse cover of mixed grasses, cacti, succulents, and woody shrubs; trees are present in Arroyo Primero. Surface visibility is 90 percent.

Disturbance: Site 41PS35 has been impacted by minimal erosion and the previous construction of an unimproved road (i.e., the present trail) through the site. The site remains approximately 80 percent intact.

Previous Investigation: This site was originally recorded by the Texas General Land Office in 1973, during an archeological survey of Chorro(b) Canyon (GLO 1975). The site was again documented in 1975 during the Natural Area Survey of The Solitario and Fresno Canyon (Hudson 1976a, 1976b).

Present Investigation: Site 41PS35 was re-recorded in 2009. The site consists of four burned rock scatters and a substantial lithic scatter. Among the artifacts noted were seven portable metates. Based on gravel deposits and creek bank observations in the area, the thickness of the cultural deposit at 41PS35 is estimated to be less than 10 centimeters.

Artifacts: Artifacts observed in 2009 at 41PS35 include chipped stone debitage, cores, bifaces, seven portable metates, and firecracked rocks. No temporally diagnostic artifacts were noted. Although two projectile points were reported from the site during the 1973 investigation by the GLO, the point types were not identified. As a result, the age of the site is unknown.

Significance: Based on the substantial artifact density and the relative condition of this site, it is considered to have moderate research value. Site 41PS35 meets State Antiquities Landmark Criteria 1 and 2 and is recommended for designation as an official State Antiquities Landmark.

Recommendations: This site, which is bisected by the present trail, should be monitored on at least a quarterly basis. If needed, the frequency of monitoring should be increased. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

***41PS167***

Site Type: Site 41PS167 is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures 50 meters northeast-southwest by 30 meters northwest-southeast, encompassing 0.37 acre.

Landform: Site 41PS167 is situated on an upland toeslope south of Arroyo Primero.

Soil Type: The NRCS has mapped the soils within the site area as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation at 41PS167 is 3,160 feet AMSL.

Vegetation: Vegetation at this site is very sparse, and primarily includes creosote and leatherstem. Surface visibility is 90 percent.

Disturbance: Sheetwash erosion and animal trampling were evident at 41PS167, but the site remains approximately 90 percent intact.

Previous Investigation: This site was originally recorded by William Hudson in 1975, during the Fresno Canyon Natural Area Survey (Hudson 1976b:125,138).

Present Investigation: This site was re-recorded in 2009. Site 41PS167 is a lithic procurement site consisting of a small lithic scatter produced entirely from yellow chert. This lithic material is available on-site from a limestone outcrop. Based on bedrock exposures, and the presence of surface cobbles and gravels at 41PS167, the cultural material at this site appears to be limited to the ground surface.

Artifacts: Artifacts observed at 41PS167 include chipped stone debitage, cores, bifaces, and other tools. No temporally diagnostic artifacts were observed. The debitage consists of all stages of lithic reduction.

Significance: This site has low research potential and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS167.

***41PS1089***

Site Type: Site 41PS1089 is an open campsite of unknown prehistoric age.

Site Area: The site measures 60 meters east-west by 30 meters north-south, encompassing 0.4 acre.

Landform: Site 41PS1089 is located on a low ridge west of the confluence of Arroyo Primero and an unnamed intermittent tributary.

Soil Type: Natural Resources Conservation Service soil maps identify the soil unit in the site area as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range of 41PS1089 is 3,190 to 3,200 feet AMSL.

Vegetation: Vegetation consists of mixed grasses, cacti, succulents, and woody shrubs, increasing closer to Arroyo Primero. Surface visibility is 90 percent.

Disturbance: The site has been impacted by severe erosion along Arroyo Primero, and is about 60 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1089 was recorded in 2009. This small site consists of three burned rock scatters and an associated lithic scatter of moderate density. Based on the presence of thin soils and gravel deposits within the site area, the thickness of the cultural deposits at this site is estimated to be less than 10 centimeters.

Artifacts: The artifact assemblage at 41PS1089 is limited to chipped stone debitage, cores, one portable metate, and firecracked rocks. No temporally diagnostic prehistoric artifacts were observed.

Significance: This site has a moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1089.

***41PS1090***

Site Type: Site 41PS1090 is a lithic procurement site of unknown prehistoric age, and a probable twentieth century ranching feature.

Site Area: The site measures 150 meters northwest-southeast by 50 meters northeast-southwest, encompassing 0.4 acre.

Landform: Site 41PS1090 is located on a slightly sloping low ridge that extends southeast toward the north side of Arroyo Primero.

Soil Type: The Natural Resources Conservation Service has identified soils in the site area as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range of 41PS1090 is 3,200 to 3,250 feet AMSL.

Vegetation: Vegetation on the site is sparse, consisting of mixed grasses, cacti, and woody shrubs. Surface visibility is 80 percent.

Disturbance: The site has been impacted by erosion and an existing ranch road (present trail) through the site. The road had been recently maintained with a bulldozer at the time of the investigation, further damaging the site. Nonetheless, 41PS1090 remains about 80 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1090 was recorded in 2009. The prehistoric component of this site is limited to a large scatter of lithic artifacts that identify this site as a lithic procurement location. In addition, a rock alignment, presumed to have been constructed sometime in the twentieth century, was observed in close proximity to the existing road. However, no historic artifacts were evident on the site. Thin gravelly deposits in the site area suggest that the cultural deposits at 41PS1090 are less than 10 centimeters in thickness.

Artifacts: The artifact assemblage at this site is limited to chipped stone debitage, cores, bifaces, and scrapers. No temporally diagnostic prehistoric artifacts were observed.

Significance: This site has a moderately low research value and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1090.

***41PS1091***

Site Type: Site 41PS1091 is an open campsite of unknown prehistoric age.

Site Area: The site measures 60 meters northeast-southwest by 50 meters northwest-southeast, encompassing 0.7 acre.

Landform: This site is on an upland footslope overlooking the north side of Arroyo Primero, west of Fresno Canyon.

Soil Type: Soils at 41PS1091 have been identified as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation range at 41PS1091 is 3,220 to 3,235 feet AMSL.

Vegetation: Vegetation is sparse across the site and consists of mixed grasses, cacti, and woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by severe erosion and animal burrowing and trampling. The site is approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1091 was recorded in 2009. The site consists of a burned rock scatter (27 by 17 m) and an associated lithic scatter. Based on the thin gravelly deposits in the site area, the thickness of the cultural deposit at 41PS1091 is estimated to be less than five centimeters.

Artifacts: Artifacts noted at 41PS1091 include chipped stone debitage, bifaces, and fire-cracked rocks. No temporally diagnostic artifacts were observed.

Significance: This site has moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1091.

***41PS1092***

Site Type: Site 41PS1092 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 90 meters north-south by 50 meters east-west, encompassing 1.1 acres.

Landform: This site is on an undulating terrace overlooking the north side of Arroyo Primero, west of Fresno Canyon.

Soil Type: Soils in the site area have been mapped by the Natural Resources Conservation Service as Studybutte very gravelly sandy clay loam, 5 to 30 percent slopes (USDA 2013).

Elevation: The elevation at the center of 41PS1092 is 3,610 feet AMSL.

Vegetation: Vegetation is very sparse across the site and consists of cacti, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by severe erosion and is approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1092 was recorded in 2009. The site consists solely of a large lithic scatter. No cultural features were observed. Based on the deflated landform upon which 41PS1092 is situated, the thickness of the cultural deposit is less than 10 centimeters.

Artifacts: Artifacts noted at 41PS1092 include chipped stone debitage, cores, and bifaces. No temporally diagnostic artifacts were observed.

Significance: This site has low research value and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1092.

***41PS1093***

Site Type: Site 41PS1093 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 80 meters north-south by 50 meters east-west, encompassing one acre.

Landform: This site is located on an upland saddle between two small mesas, north of Arroyo Primero.

Soil Type: Soils in the 41PS1093 site area have been mapped by the Natural Resources Conservation Service as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation at the center of 41PS1093 is 3,400 feet AMSL.

Vegetation: Vegetation is very sparse across the site and consists of cacti and woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by moderate erosion, and animal burrowing and trampling. The site is approximately 60 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1093 was recorded in 2009. The site consists solely of a large lithic scatter. No cultural features were observed. Based on the deflated landform upon which 41PS1093 is located, the thickness of the cultural deposit is less than five centimeters.

Artifacts: Artifacts observed at 41PS1093 consist of chipped stone debitage and bifaces. No temporally diagnostic artifacts were observed.

Significance: This site has low research value and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1093.

***41PS1094***

Site Type: Site 41PS1094 is a lithic scatter of unknown prehistoric age, and an early twentieth century stacked rock alignment.

Site Area: The site measures 70 meters northeast-southwest by 30 meters northwest-southeast, encompassing 0.5 acre.

Landform: This site is located on a basalt outcrop that rises above a bend in Arroyo Primero.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS1094 site area as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1094 ranges from 3,430 to 3,450 feet AMSL.

Vegetation: A very sparse cover of mixed grasses, cacti, and woody shrubs provides 90 percent surface visibility on the site.

Disturbance: This site has been impacted by moderate sheet erosion and deflation. The site is approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1094 was recorded in 2009. The prehistoric component of the site consists solely of a large lithic scatter. The historic component includes a stacked rock alignment that appears to be the remnants of a rectangular structure. Based on the nature of the historic artifacts observed in the area, the structure would have most likely been a residence. An abandoned road segment is also evident along the southeastern boundary of the site. Based on the thin gravels that mantle the upland landform upon which 41PS1094 is located, the thickness of the cultural deposit at this site is less than 10 centimeters.

Artifacts: Prehistoric artifacts observed at 41PS1094 are limited to chipped stone debitage. Historic items include two milled boards and two square posts, various tin cans, a screw-top cap, a cast iron pan, an unmarked amethyst bottle base (recovered for curation), one clear bottle glass fragment, wire, one piece of tire tread, and two cartridges with headstamps ('REM–UMC 44 WCF', 'Peters 7m/m'). The historic artifacts all appear to date to the early twentieth century.

Significance: This site has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1094.

***41PS1095***

Site Type: Site 41PS1095 is an open campsite of unknown prehistoric age.

Site Area: The site measures 100 meters northwest-southeast by 40 meters northeast-southwest, encompassing one acre.

Landform: This site is situated on a gravel bench overlooking Arroyo Primero.

Soil Type: The Natural Resources Conservation Service has mapped the soils within the 41PS1095 site area as 60 percent Studybutte-Rock outcrop complex, 10 to 30 percent slopes and 40 percent Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1095 ranges from 3,660 to 3,670 feet AMSL.

Vegetation: Much of the site is sparsely covered with mixed grasses, cacti, succulents, and woody shrubs; the density of brush increases closer to the Arroyo Primero drainage. Surface visibility is 70 percent.

Disturbance: This site has been severely impacted by erosion along the creek bank; a burned rock midden is eroding into the creek. The site is approximately 50 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1095 was recorded in 2009. This site consists of a relatively dense lithic scatter and remnants of a burned rock midden (32.5 by 18.3 m). As noted, the midden is eroding into Arroyo Primero and has been severely impacted. Based on examinations of the drainage cutbank, the thickness of the cultural deposit at this site is about one meter.

Artifacts: Artifacts observed at 41PS1095 include a relatively dense scatter of chipped stone debitage, cores, bifaces, one scraper, one portable metate, and firecracked rocks. No temporally diagnostic artifacts were observed.

Significance: This site has moderately low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1095.

***41PS1096***

Site Type: Site 41PS1096 is a Late Archaic lithic scatter, and a rock alignment of unknown age.

Site Area: The site measures 100 meters north-south by 60 meters east-west, encompassing 1.5 acres.

Landform: This site is located on a bench on the south bank confluence of an unnamed arroyo and Arroyo Primero.

Soil Type: Soils in the area of 41PS1096 have been identified by the NRCS as Terlingua- Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1096 ranges from 3,660 to 3,680 feet AMSL.

Vegetation: The site is very sparsely covered with mixed grasses, cacti, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by minimal sheetwash erosion, and remains 80 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1096 was recorded in 2009. This site consists of a large, relatively dense lithic scatter and a semicircular rock alignments consisting of a single course of rocks. The rock alignment is located near the northern end of the site, and measured 7.6 by 6.4 m. Based on observations of the arroyo wall, the thickness of the cultural deposit at this site is less than 10 centimeters.

Artifacts: Artifacts noted at 41PS1096 include chipped stone debitage (primarily late stage reduction produced from a wide variety of lithic material), and bifaces. One Late Archaic Lange dart point was recovered from the site for curation.

Significance: This site has moderately low research value and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1096.

***41PS1097***

Site Type: Site 41PS1097 is an open campsite of unknown prehistoric age.

Site Area: The site measures 40 meters northeast-southwest by 40 meters northwest-southeast, encompassing 0.4 acre.

Landform: This site is located on a low gravel bench overlooking an unnamed creek that is a tributary to Arroyo Primero.

Soil Type: Soils at 41PS1097 have been identified by the Natural Resources Conservation Service as Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1097 ranges from 3,660 to 3,670 feet AMSL.

Vegetation: Vegetation is sparse across much of the site, and includes mixed grasses, cacti, succulents, and woody shrubs. The vegetation is heavier closer to the arroyo. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion and animal trampling and burrowing. The site remains about 40 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1097 was recorded in 2009. One feature was recorded—a burned rock scatter (9.3 by 10.4 m). A moderately dense lithic scatter is associated with the feature. Based on area cutbank observations, the thickness of the cultural deposit at 41PS1097 is less than 10 centimeters.

Artifacts: The artifact assemblage at this site includes chipped stone debitage, cores, bifaces, scrapers, one spokeshave, one distal projectile point fragment, one portable metate fragment, one retouched flake, and firecracked rocks. No temporally diagnostic artifacts were observed.

Significance: Site 41PS1097 has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1097.

***41PS1098***

Site Type: Site 41PS1098 is a Late Archaic open campsite.

Site Area: The site measures 160 meters northeast-southwest by 70 meters northwest-southeast, encompassing 2.8 acres.

Landform: This site is located on a terrace of an unnamed intermittent tributary of Arroyo Primero.

Soil Type: Soils at 41PS1098 have been identified by the Natural Resources Conservation Service as 50 percent Studybutte-Rock outcrop complex, 10 to 30 percent slopes, and 50 percent Terlingua-Rock outcrop complex, 3 to 30 percent slopes (USDA 2011).

Elevation: The elevation at 41PS1098 ranges from 3,680 to 3,720 feet AMSL.

Vegetation: Except for the burned rock midden at 41PS1098, vegetation is sparse across the site, and includes cacti and woody shrubs. Vegetation is denser on the midden. Surface visibility is 70 percent.

Disturbance: This site has been impacted by severe erosion and animal trampling and burrowing, as well as the establishment of an existing road through the site (present trail). Recent bulldozing maintenance of this road has further impacted the burned rock midden at this site. The site is about 60 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1098 was recorded in 2009. Cultural features consist of two hearths, two burned rock scatters, and a burned rock midden. The midden is dense with firecracked rocks, chipped stone debitage, and other chipped stone items. Dark gray midden soil is evident across the midden and in an existing road that cuts into the midden, as well as in the northwest wall of an arroyo that cuts through the eastern part of the site. Recent bulldozing was evident within the road at the time of the investigation. Based on observations of the midden soils in the arroyo wall, the thickness of the cultural deposit at this site is about 80 centimeters.

Artifacts: The artifact assemblage is comprised of chipped stone debitage, cores, bifaces, two portable metate fragments, and firecracked rocks. In addition, one Late Archaic Paisano dart point was recovered from the site for curation.

Significance: Site 41PS1098 has moderately high research value, and meets Criteria 1 and 5 for designation as an official State Antiquities Landmark.

Recommendations: Since the 2009 investigation, sterile fill has been placed on the existing road at 41PS1098; the fill will need to be periodically maintained. The site should be monitored on a quarterly basis. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

***41PS1099***

Site Type: Site 41PS1099 is an open campsite of unknown prehistoric age, and a twentieth century livestock complex.

Site Area: The site measures 170 meters east-west by 120 meters north-south, encompassing five acres.

Landform: This site is situated on a large flat area, between an intermittent unnamed drainage to the south and Arroyo Primero to the north.

Soil Type: The Natural Resources Conservation Service has mapped soils in the area of 41PS1099 as Studybutte-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1099 is 3,720 feet AMSL.

Vegetation: Vegetation at this site includes a sparse cover of cacti and woody shrubs, providing 90 percent surface visibility.

Disturbance: The site has been impacted by moderate erosion and animal trampling and burrowing, as well as the establishment of an existing road through the site (present trail). Recent bulldozing/maintenance of this road has further impacted 41PS1099. The site is about 60 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2009. The prehistoric component of this site consists of two burned rock scatters and associated lithic artifacts. Historic features are one trough, remnants of one livestock pen (three-sided rock alignment with remnant fence posts), and six rock cairns. The cairns were identified as being historic based on their intact nature and alignment, and their proximity to the existing road. Few historic artifacts were found on the site. Based on the thin gravelly soils at 41PS1099, the thickness of the cultural deposit at this site is estimated to be less than 10 centimeters.

Artifacts: Prehistoric artifacts observed at this site include chipped stone debitage, bifaces, scrapers, manos, one portable metate (used in the historic rock alignment), and firecracked rocks. Historic items were limited to tin cans.

Significance: Site 41PS1099 has low research value, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

**South Leyva Trail**

The South Leyva Trail extends from the South Leyva Campground, northeast of the Sauceda Ranger Station, westward approximately 3.2 miles to the Cinco Tinajas Trailhead (Figure 27). Much of this multi-use trail follows the Leyva Canyon drainage. As a result, the width of the trail is variable.

The South Leyva Trail corridor was surveyed April 27 – 29, 2009. The area surveyed along the route encompassed 177 acres. Five previously recorded archeological sites (41PS456, 41PS513, 41PS515, 41PS516, 41PS856) and six newly discovered sites (41PS1071–1075, and 41PS1157) were recorded along this trail corridor. Site descriptions are below. Summaries of these sites are provided in Appendix A. Twelve isolated finds were documented along this trail corridor (Appendix C).

***41PS456***

Site Type: Site 41PS456 is an Archaic, Late Prehistoric, and Historic open campsite, and boulder shelter with pictographs.

Site Area: The site measures 160 meters northeast-southwest by 160 meters east-west, encompassing an area of 6.33 acres.

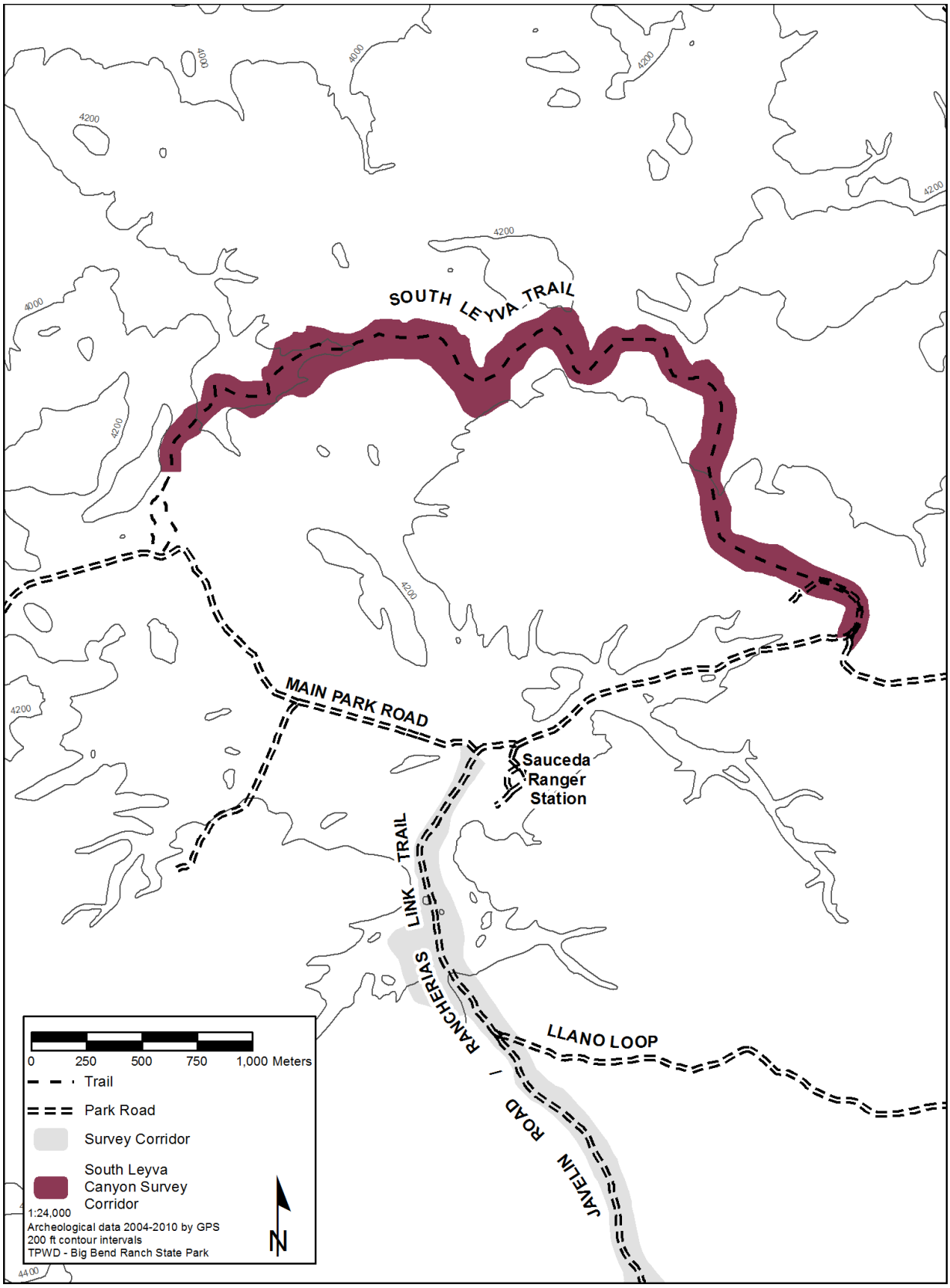


**Figure 27.** Map showing location of South Leyva Trail.

Landform: Site 41PS456 is located on the bench on the north side of Leyva Canyon, below the prominent rock outcrop to the northeast. The boulder shelter is located among large colluvial boulders on the bench, and the midden stretches from the creek bank to the bench. Leyva Escondido Spring is located 200 meters upstream.

Soil Type: The NRCS soil maps identify the site area as 50 percent Pantak and Lingua soils, 1 to 16 percent slopes, 40 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded, and 10 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS456 ranges from 3,960 to 4,000 feet AMSL.

Vegetation: Vegetation consists of typical Chihuahuan Desert scrub, including woody shrubs, cacti, and grasses. Vegetation is dense along the creek and sparse on the bench. Surface visibility is 90 percent.

Disturbance: Site 41PS456 has been impacted by erosion, animal burrowing and trampling. In addition, the presence of cull piles at the site indicate that surface collecting has occurred. The site is estimated to be about 70 percent intact.

Previous Investigations: Site 41PS456 was originally recorded in 1989 by William A. Cloud, Mike Davis, Bruce Nightengale, J. David. Ing, and Cynthia Banks, and is reported in Archeological Reconnaissance on Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996).

Present Investigation: Site 41PS456 was re-recorded in 2009. Features consist of three scattered hearths (diameter measures approximately 1.5 to 2.4 m), one burned rock scatter (10 by 9 m), one burned rock midden along the arroyo (45 by 105 m), seven bedrock mortars, a boulder shelter with a stacked rock wall, and two pictograph panels. The pictographs are all red monochromatic images, several of which are anthropomorphic, including one that is very similar to a red painted figure at site 41PS201. At least four horse and rider figures are also included among the pictographs at this site. Based on cutbank observations in the site area, archeological deposits at 41PS456 may extend as much as 50 centimeters in depth.

Artifacts: Artifacts observed during the 2009 investigation include chipped stone debitage, cores, bifaces, scrapers, manos, one metate, and firecracked rocks. No diagnostic artifacts were recovered during this survey, but one arrow point of unknown type was recovered by park staff earlier in 2009.

Significance: Site 41PS456 is considered to have high research value, and was listed as an official State Archeological Landmark on May 30, 1997.

Recommendations: The proposed South Leyva Trail corridor follows the Leyva Canyon drainage immediately adjacent (south) of 41PS456. Consideration was given to rerouting the trail on the south side of the drainage, further away from 41PS456, but another archeological site, 41PS1072, is located on the south side of the drainage in this area. As a result, the trail was kept in the drainage through this area. Site 41PS456 should be monitored at least quarterly and additionally as opportunities allow. This site has also been a destination for equestrian tours; all horses should be kept in the drainage, off of the site. Steps should also be taken to keep other livestock off of this site. Any cull piles observed on the site should be dispersed to avoid others from adding to these piles.

***41PS513***

Site Type: Site 41PS513 is a Late Archaic lithic scatter.

Site Area: The site measures 30 meters north-south by 40 meters east-west, encompassing 0.29 acre.

Landform: This site is located on the first terrace on the south side of the Leyva Canyon drainage. The site is bisected by an erosional gully.

Soil Type: Soils in the area of 41PS513 have been identified by the NRCS as Scotol-Rock outcrop complex, 5 to 30 percent slopes (USDA 2013).

Elevation: The elevation of this site is 4,000 feet AMSL.

Vegetation: Vegetation at 41PS513 is sparse and consists of typical Chihuahuan Desert scrub, including woody shrubs, cacti, and grasses. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling. The site is estimated to be only about 20 percent intact.

Previous Investigations: Site 41PS513 was originally recorded by William A. Cloud and Debra Beene in 1990, and is reported in Archeological Reconnaissance on Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996).

Present Investigation: Site 41PS513 was re-recorded during the 2009 field season. The site consists of a very light scatter of fewer than 20 lithic artifacts. No cultural features were observed. Observations of the gully cutbank through the site area indicated that the potential depth of cultural deposits was no greater than 10 centimeters.

Artifacts: One Late Archaic Paisano dart point was recovered from this site during the original 1990 investigation. However, artifacts observed at 41PS513 during the 2009 investigation were limited to fewer than 20 pieces of chipped stone debitage.

Significance: Site 41PS513 has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS513.

***41PS515***

Site Type: Site 41PS515 is an open campsite of unknown prehistoric age.

Site Area: The site measures 80 meters north-south by 70 meters east-west, encompassing 1.38 acres.

Landform: This site is located on the first terrace on the west side of the tributary to Leyva Canyon, about 250 meters southeast of Cinco Tinajas—a series of natural pools in the bedrock of Leyva Canyon.

Soil Type: Soils at 41PS515 have been mapped by the NRCS as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of 41PS515 is 4,000 feet AMSL.

Vegetation: Vegetation in the site area is moderately thick and consists of typical Chihuahuan Desert scrub, including woody shrubs, cacti, and grasses. Surface visibility was 50 percent.

Disturbance: Site 41PS515 has been impacted by erosion, animal burrowing and trampling,

and bulldozing of an existing ranch road (i.e., trail) through the area. The site is estimated to be about 50 percent intact.

Previous Investigations: This site was originally recorded by William A. Cloud and Debra Beene in 1990, and is reported in Archeological Reconnaissance on Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996).

Present Investigation: Site 41PS515 was re-recorded in 2009. A single burned rock midden, measuring 15 meters in diameter, was observed on the site. The midden, however, is bisected by an existing ranch road. A bulldozer push pile, with numerous burned rocks, is evident about four meters southeast of the midden. A light scatter of chipped and ground stone artifacts was reported at this site during the 1990 survey. The 2009 investigation revealed only a few pieces of lithic debitage along the north and west edges of the site. Based on observations of the road cut through this site, the depth of cultural deposits is estimated to be 10 centimeters.

Artifacts: Artifacts observed at 41PS515 during the present investigation are limited to a sparse scatter of chipped stone debitage and bifaces.

Significance: Site 41PS515 has moderately low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS515.

***41PS516***

Site Type: Site 41PS516 is an open campsite of unknown prehistoric age.

Site Area: The site measures 20 meters north-south by 50 meters east-west, encompassing 0.25 acre.

Landform: This site is situated on an alluvial terrace north of the Leyva Canyon drainage. Leyva Escondida Spring is located about 120 meters southwest of the site.

Soil Type: Soils within the 41PS516 site area have been mapped by the NRCS as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of this site is 4,040 feet AMSL.

Vegetation: Vegetation at 41PS516 is moderately thick and consists of woody shrubs, cacti, and grasses. A few large trees grow along the drainage. Surface visibility is 50 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, and is estimated to be only 40 percent intact.

Previous Investigations: Site 41PS516 was originally recorded by William A. Cloud and Debra Beene in 1990, and is reported in Archeological Reconnaissance on Big Bend Ranch State Park, Presidio and Brewster Counties, Texas, 1988–1994 (Ing et al. 1996).

Present Investigation: This site was re-recorded in 2009. Two cultural features were noted on the site, including a burned rock midden and a dispersed hearth. The burned rock midden measures 23 by 51 m, and is heavily eroded; nonetheless, dark midden soil was still evident in 2009. The dispersed hearth measures about 0.7 by 0.6 m. Chipped stone artifacts were reported in association with these features in 1990, but none were observed during the present investigation. Based on gully cutbank observations, the depth of cultural deposits at this site is estimated to be approximately 30 centimeters.

Artifacts: Artifacts observed at 41PS516 are limited to firecracked rocks.

Significance: This site has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS516.

***41PS856 (South Leyva Pit)***

Site Type: Site 41PS856 is a twentieth century borrow pit and lithic scatter of unknown prehistoric age.

Site Area: The site measures 20 meters north-south by 30 meters east-west, encompassing 0.15 acre.

Landform: This site is located on an upland setting, about 250 meters southeast of the South Leyva Campground.

Soil Type: Soils at 41PS856 have been mapped by the NRCS as Scotal-Rock outcrop complex, 5 to 30 percent slopes (USDA 2013).

Elevation: The elevation of this site is 4,240 feet AMSL.

Vegetation: Vegetation at 41PS856 is sparse and consists of typical Chihuahuan Desert scrub, including cacti, grasses, and woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion, and animal burrowing and trampling. With the exception of the borrow pit itself, there were no apparent human–caused impacts to the site. The site is estimated to be only 30 percent intact.

Previous Investigations: Site 41PS856 was originally recorded by the Center for Big Bend Studies, Sul Ross State University, Alpine, Texas, in 2001, during an archeological survey of select boundary and power line segments (Ohl and Cloud 2001).

Present Investigation: Although 41PS856 does not meet TPWD's current standards for designation as a site, it was re-recorded in 2009. A borrow pit, measuring approximately 10 by 25 meter and 1 meter deep, was re-recorded and a sparse, widely dispersed lithic scatter was observed on the ground surface in the area around the borrow pit. Based on the deflated desert soils in the area, the depth of cultural deposits at this site is approximately 10 centimeters.

Artifacts: Artifacts observed at this site consist of three horseshoes, one sardine can, and about six pieces of chipped stone debitage.

Significance: Site 41PS856 has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS856.

***41PS1071***

Site Type: Site 41PS1071 is an open campsite of unknown prehistoric age.

Site Area: The site measures 90 meters northeast-southwest by 60 meters east-west, encompassing 1.33 acres.

Landform: This site is located on the first terrace on the south bank of Leyva Canyon.

Soil Type: Soils at 41PS1071 have been identified by the NRCS as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of this site is 4,080 feet AMSL.

Vegetation: Vegetation is dense along the Leyva Canyon drainage and sparse on the terrace. It consists of typical Chihuahuan Desert scrub, including cacti, woody shrubs, and grasses,

with a few trees along the drainage. Surface visibility is 80 percent.

Disturbance: Site 41PS1071 has been impacted by erosion, and animal burrowing and trampling. The site is estimated to remain 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1071 was recorded in 2009. A single burned rock midden, measuring 52 meters northeast-southwest by 24 meters east-west, was observed eroding out of the south creek bank in this area. Ashy soil, firecracked rocks, and chipped stone debitage were found in direct association with the midden; a light lithic scatter extends beyond the midden. Based on cutbank observations, the depth of cultural deposits at this site is approximately one meter.

Artifacts: Artifacts observed at 41PS1071 include chipped stone debitage, bifaces, scrapers, manos, and firecracked rocks.

Significance: Site 41PS1071 has moderately high research potential, and is recommended for nomination as an official State Antiquities Landmark under Criteria 1 and 2.

Recommendations: This site should be nominated as an official State Archeological Landmark, and should be monitored on at least a biannual basis.

***41PS1072***

Site Type: Site 41PS1072 is a Late Archaic and Late Prehistoric open campsite with an associated rockshelter.

Site Area: The site measures 170 meters north-south by 100 meters east-west, encompassing 4.20 acres.

Landform: This site is located mostly on a bench on the south side of Leyva Canyon. An associated rockshelter and talus are located along the canyon wall southeast of the bench.

Soil Type: Soils at 41PS1072 have been identified by the NRCS as 70 percent Scotal–Rock outcrop complex, 5 to 30 percent slopes and 30 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation range of 41PS1072 is 4,000 to 4,040 feet AMSL.

Vegetation: Vegetation is dense along the Leyva Canyon drainage and sparse on the bench. It consists of typical Chihuahuan Desert scrub, including cacti, woody shrubs, and grasses. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, and animal burrowing and trampling. The open portion of 41PS1072 is estimated to be about 60 percent intact, while the rockshelter is 90 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1072 was recorded in 2009. Surveyors identified several cultural features on the site. One deflated hearth, approximately 1.5 meters in diameter and four burned rock scatters (6 meters to 20 meters in diameter) were recorded on a wide gravelly bench between the Leyva Canyon drainage and the canyon slope. A rockshelter with talus deposits is located in the rock face along the southeast canyon wall. The talus measures 34 meters north-south by 38 meters east-west. Artifacts were evident in the rockshelter and across the open area of the site. Based on gully cutbank observations, the depth of cultural deposits is approximately 20 centimeters.

Artifacts: Artifacts recorded at 41PS1072 include one Late Archaic Palmillas dart point (Form 2), one Late Prehistoric Perdiz arrow

point (found in the rockshelter), a biface, and a possible hand-forged ferrous table knife. The projectile points and the knife were collected for curation. Other artifacts observed on the site include chipped stone debitage, scrapers, bifaces, four manos and two metates (in the shelter), firecracked rocks, and a sardine can.

Significance: Site 41PS1072 has high research potential, and is recommended for nomination as an official State Antiquities Landmark under Criteria 1 and 2.

Recommendations: Site 41PS1072 should be monitored on at least a biannual basis, and considered for more frequent monitoring if visitation or damage to the site warrants. The site should be nominated for designation as an official State Antiquities Landmark.

***41PS1073***

Site Type: Site 41PS1073 is an open campsite of unknown prehistoric age.

Site Area: The site measures 60 meters north-south by 100 meters east-west, encompassing 1.48 acres.

Landform: This site is located on a bench on the south bank of Leyva Canyon.

Soil Type: Soils at 41PS1073 have been mapped by the NRCS as 80 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded, and 20 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of this site is 4,080 feet AMSL.

Vegetation: Vegetation is very dense along the Leyva Canyon drainage and sparse on the bench. It consists of typical Chihuahuan Desert scrub, including cacti, woody shrubs, and grasses, with a few trees along the drainage. Surface visibility is 80 percent.

Disturbance: Site 41PS1073 has been impacted by erosion, and animal burrowing and trampling, and is estimated to be 60 percent intact.

Previous Investigations: None.

Present Investigation: This site was recorded in 2009. Cultural features at this site consist of one burned rock midden along the creek bank, measuring 20 by 20 m, two small burned rock scatters (13 by 5 and 5 by 5 m), and a hearth eroding out of a small gully (1.2 m). Some rocks within the hearth feature were cracked in place. Firecracked rocks, as well as chipped stone artifacts are scattered across the site. Based on cutbank observations, the depth of cultural deposits at this site is approximately 15 centimeters.

Artifacts: Artifacts documented at 41PS1073 include one untyped dart point fragment (collected for curation), chipped stone debitage, cores, bifaces, and firecracked rocks.

Significance: Site 41PS1073 has moderate research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: This site should be monitored on an annual basis.

***41PS1074***

Site Type: Site 41PS1074 is an open campsite of unknown prehistoric and historic age.

Site Area: The site measures 150 meters northwest-southeast by 80 meters east-west, encompassing 2.96 acres.

Landform: This site is situated on the north bank of Leyva Canyon on a small bench overlooking the alluvial terrace. The west end of the site extends down onto the terrace.

Soil Type: Soils within the 41PS1074 site area have been mapped by the NRCS as 80 percent Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded, and 20 percent Pantak and Lingua soils and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of this site is 4,080 feet AMSL.

Vegetation: Large cottonwoods and Bois d'Arc trees grow directly across the drainage from the 41PS1074, suggesting a spring; however, no water was evident at the time of the investigation. On the site, vegetation consists of typical Chihuahuan Desert scrub, including cacti, woody shrubs, and grasses. Surface visibility is 70 percent.

Disturbance: This site has been impacted by erosion, and animal burrowing and trampling. The site is estimated to be 70 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1074 was recorded in 2009. The site was found to contain a 27 by 13 m burned rock midden along the creek bank, and three stacked rock structures on the bench above the terrace. The age of the stacked rock structures is unknown, but it is possible that they are prehistoric. One of these features, however, was built or rebuilt historically, with the addition of a 'window' opening. This structure may have served as a hunting blind; the window faces the trees across the drainage, and a cartridge was found just beyond the window. This feature measures 1.2 meters tall by 2.5 meters in diameter, and contains whiteware sherds. The other two stacked rock features are each about 70 centimeters tall by 3.5 meters in diameter, and contain no artifacts. Based on cutbank observations, the depth of cultural deposits at this site is approximately one meter.

Artifacts: Prehistoric artifacts documented at 41PS1074 are chipped stone debitage, cores, bifaces, manos, two metates, and firecracked rocks. Historic items include an 1860–1930s .44 caliber Henry rim-fire cartridge (recovered for curation), Mexican earthenware, and whiteware sherds.

Significance: Site 41PS1074 has moderately high research potential, and is recommended for nomination as an official State Antiquities Landmark under Criteria 1 and 2.

Recommendations: Site 41PS1074 should be monitored on at least a biannual basis, and perhaps more frequently depending on usage of the trail and any evidence of vandalism to the site. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

***41PS1075***

Site Type: Site 41PS1075 is an open campsite that may date to the Early Archaic period.

Site Area: The site measures 100 meters northwest-southeast by 70 meters northeast-southwest, encompassing 1.73 acres.

Landform: Site 41PS1075 is located in an upland setting that has been eroded by numerous erosional gullies.

Soil Type: Soils within the site area have been mapped by the NRCS as Scotal-Rock outcrop complex, 5 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1075 is 4,240 feet AMSL.

Vegetation: Vegetation at this site is sparse and consists of typical Chihuahuan Desert scrub, including cacti and woody shrubs. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion, animal burrowing and trampling, and construction of a barbed wire fence across the site. The site is estimated to be only about 30 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1075 was recorded in 2009. The survey resulted in the identification of five heavily eroded and dispersed hearths, ranging in size from 0.5 to 2 meters in diameter with one dispersed hearth nearly 5 meters in length. A sparse scatter of lithic artifacts was found in association with the hearths. A barbed wire fence bisects the site. Observations of erosional cutbanks in the area indicated that the maximum depth of cultural deposits at this site is approximately 10 centimeters.

Artifacts: Artifacts documented at 41PS1075 are one Early Archaic expanding stem dart point (recovered for curation), chipped stone debitage, and firecracked rocks.

Significance: Site 41PS1075 is heavily eroded and the research potential is somewhat low. The site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1075.

***41PS1157***

Site Type: Site 41PS1157 is a Late Prehistoric Cielo complex habitation.

Site Area: The site measures 50 meters southwest-northeast by 15 meters northwest-southeast, encompassing 0.2 acre.

Landform: Site 41PS1157 is located on an upland hill summit and ridgeline on the right bank of the Leyva Canyon drainage.

Soil Type: The site is located within an area identified as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation range of 41PS1157 is 4,060 to 4,080 feet AMSL.

Vegetation: Vegetation at this site is sparse and consists of typical Chihuahuan Desert scrub, including mixed grasses, cacti, and woody shrubs. Surface visibility is 80 percent.

Disturbance: This site has been impacted by erosion, but is estimated to remain about 80 percent intact.

Previous Investigation: None.

Present Investigation: Site 41PS1157 was recorded in 2009. The survey resulted in the identification of five semi-circular stacked rock features attributable to the Late Prehistoric Cielo complex. These features consist of 1 to 3 courses of igneous rocks, with openings to the west or southwest. Interior diameters of these features range from 1.22 to 2.6 meters. Very few artifacts were observed on the site. Based on the lack of soil development on the upland landform upon which 41PS1157 is situated, the maximum depth of cultural deposits at this site is less than five centimeters.

Artifacts: Only a couple of chipped stone flakes were evident on the surface of 41PS1157. No other artifacts were observed.

Significance: This site is considered to have moderate research potential due to its potential relationship to adjacent archeological site 41PS456. The site is recommended for nomination as an official State Antiquities Landmark under Criteria 1 and 2.

Recommendations: Site 41PS1157 is out of view of the present trail, and is unlikely to elicit the attention of trail users. The site should be

nominated for designation as an official State Antiquities Landmark, but no additional work is recommended at 41PS1157 at this time.

## 2010 FIELD SEASON

### Llano Loop to Fresno Canyon Trail

The Llano Loop to Fresno Canyon Trail extends southward from the Main Park Road to Chilicote Spring, then east and south to Fresno Canyon at its confluence with Arroyo Segundo (Figure 28). A portion of this trail follows an existing unimproved two-track road, which is approximately eight feet in width. The remainder of the trail requires new construction and is about three feet in width. After the 2010 archeological survey, the originally proposed trail route was slightly rerouted at its eastern terminus to avoid archeological sites 41PS158 and 41PS159. No sites were identified along the trail re-route segment.

The Llano Loop to Fresno Canyon Trail survey was conducted January 26 – 30, 2010. The area surveyed totals 453 acres. Five previously recorded sites (41PS158, 41PS159, and 41PS473-475) were re-recorded and four newly discovered sites (41PS1105-1108) were recorded during the survey of this trail segment. Site descriptions are below and site summaries are in Appendix A. Fifteen isolated finds were documented within this trail corridor (Appendix C).

#### *41PS158*

Site Type: Site 41PS158 is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures 120 meters northwest-southeast by 60 meters southwest-northeast, encompassing an area of 1.78 acres.

Landform: The site is situated on a non-aggrading upland toeslope that overlooks the right bank of Fresno Creek. The landform is bisected by a series of shallow arroyos. The site is approximately 200 meters uphill from the creek.

Soil Type: Soils in the area of 41PS158 have been identified by the NRCS as Strawhouse-Stillwell complex, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,400 to 3,440 feet AMSL.

Vegetation: Vegetation is sparse across 41PS158, and consists primarily of creosote and cacti. Surface visibility is 70 percent.

Disturbance: This site has been impacted by moderate and long-term sheetwash erosion, and animal burrowing; it is estimated to be approximately 70 percent intact.

Previous Investigations: This site was originally recorded by William Hudson during the Fresno Canyon Natural Area Survey in 1975 (Hudson 1976b:119–144).

Present Investigation: Site 41PS158 was re-recorded in 2010. The site consists of a sparse scatter of lithic artifacts. Based on the nature of the landform, the depth of cultural deposits appears to be less than 10 centimeters. No cultural features were identified on the site.

Artifacts: Chipped stone debitage and debris, and scrapers were noted during the 1975 Fresno Canyon Natural Area Survey. In 2010, only tested cobbles and large primary flakes were recorded. Lithic material is primarily a coarse-grained unknown material. Few chert or other fine-grained materials were noted.

Significance: Sites 41PS158 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

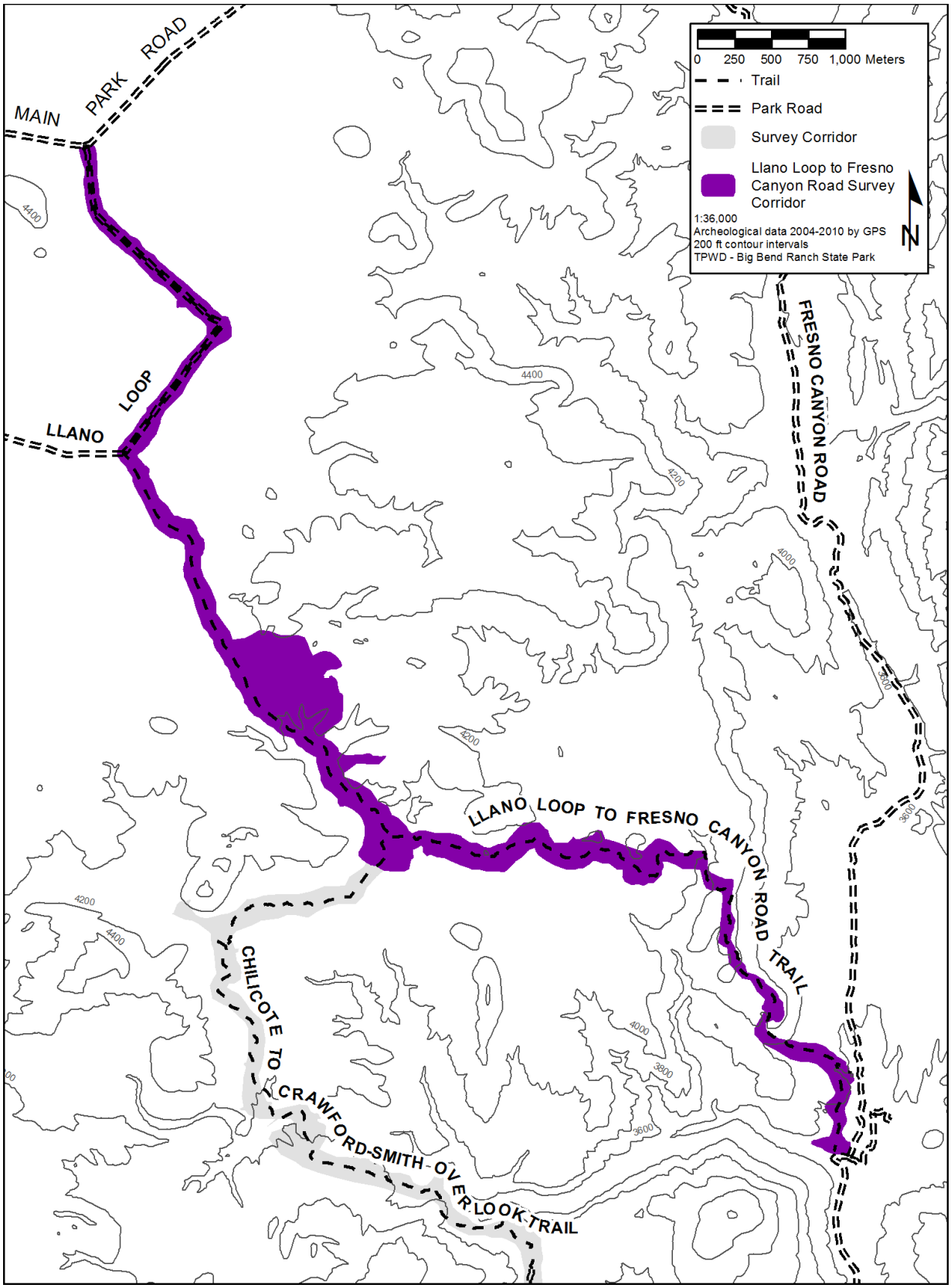


**Figure 28.** Map showing location of Llano Loop to Fresno Creek Trail.

Recommendations: The Llano Loop to Fresno Creek Trail corridor, as originally proposed, would have bisected the eastern portion of 41PS158. However, the proposed trail alignment was subsequently modified to enter Fresno Canyon north of 41PS158. As a result, the site was avoided. No further work is recommended at 41PS158.

***41PS159***

Site Type: Site 41PS159 is a multi-component Late Paleoindian, Middle Archaic, Late Archaic, and Late Prehistoric open campsite.

Site Area: The site measures 120 meters north-south by 270 meters east-west, encompassing 8.01 acres.

Landform: Site 41PS159 is situated on a T2 terrace and bench overlooking the north side of Arroyo Segundo and the west bank of Fresno Creek.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as 60 percent Riverwash and Pantera soils, 0 to 7 percent slopes, frequently flooded, and 40 percent Strawhouse-Stillhouse complex, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is 3,360 feet AMSL.

Vegetation: Vegetation across 41PS159 includes sparse grasses, cacti, and various woody shrubs. Trees grow along adjacent drainages. Surface visibility is 80 percent.

Disturbance: This site has been impacted by moderate erosion of firecracked rock features, burro trampling, and rodent disturbances; the site is estimated to be approximately 50 percent intact.

Previous Investigations: Site 41PS159 was originally recorded in 1975 by William Hudson during the Fresno Canyon Natural Area Survey (Hudson 1976b:119–144). The site was described by Hudson as a lithic scatter with no cultural features.

Present Investigation: Site 41PS159 was re-recorded in 2010. The site consists of a dense scatter of lithic debitage and debris representing all stages of tool manufacture. In addition, two burned rock middens, four hearths, and one stone circle were identified on the site. The depth of cultural deposits is estimated to be approximately 30 centimeters, based on an erosional cut through midden deposits.

Artifacts: A dense scatter of lithic artifacts was observed at 41PS159, including chipped stone cores, debitage and debris, utilized flakes, bifaces, scrapers, a possible sotol knife, three dart points, one arrow point, manos, and three portable metates. The points were identified as a Late Paleoindian Angostura dart point, a Middle Archaic Almagre dart point, a Late Archaic Palmillas dart point (Form 1), and one untyped Late Prehistoric arrow point; all points were collected. One scraper was also collected. Historic artifacts observed on the site include one roll-top tin can and one threaded metal coupling.

Significance: Site 41PS159 retains moderate research potential, and merits designation as an official State Antiquities Landmark under Criteria 1 and 2.

Recommendations: The Llano Loop to Fresno Creek Trail corridor, as originally proposed, would have bisected 41PS159. However, the proposed trail alignment was subsequently modified to enter Fresno Canyon north of 41PS159. As a result, this site was avoided. Nonetheless, the site should be monitored on an annual basis. In addition, the site should be nominated for designation as an official State Antiquities Landmark.

***41PS473 (Howard Ranch/Chilicote Viejo Ranch)***

Site Type: Site 41PS473 is a Middle and Late Archaic open campsite, and twentieth century ranch.

Site Area: The site measures 520 meters northwest-southeast by 330 meters northeast-southwest, encompassing 42.42 acres.

Landform: The site is situated on an upland bench that overlooks an alluvial fan immediately south of a ridgeline, between the headwaters of two unnamed arroyos.

Soil Type: Soils in the area of 41PS473 have been identified by the NRCS as 70 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes and 30 percent Boffecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of 41PS473 ranges from 4,240 to 4,400 feet AMSL.

Vegetation: Vegetation across the site is sparse on the bench and includes mixed grasses, cacti, and succulents. The brush is heavier within the drainage heads. Surface visibility is 50 to 70 percent.

Disturbance: Site 41PS473 has been impacted by moderate to heavy erosion, and the prehistoric component has been impacted by the subsequent historic occupation. The site is estimated to be approximately 50 percent intact.

Previous Investigations: This site was originally recorded in 1989, during an archeological reconnaissance of BBRSP (Ing et al. 1996). The historic stacked rock wall segments on the site were described as being part of a sheep herding complex, while the burned rock midden and associated lithic scatter represent a short term prehistoric occupation. Prehistoric artifacts recovered from the site in 1989 were one Middle Archaic Langtry dart point, one Late Archaic Shumla-like dart point, and a possible stone pipe fragment. Other prehistoric artifacts observed on the site include a moderate amount of flakes, two biface fragments, one uniface, and one burned bone fragment. Among the historic artifacts identified on the site were plain and brown glazed stoneware, white earthenware, undecorated porcelain fragments, various bottle glass, lard can lids, and a Prince Albert can.

Present Investigation: Site 41PS473 was re-recorded in 2010. The prehistoric component at this site includes a dense burned rock midden with gray midden soil. A light lithic scatter was recorded in the vicinity of the burned rock midden. The historic component at 41PS473 includes two stacked rock habitation features, one stacked rock animal pen, two adobe ruins, 16 rock wall segments, one dump, and a historic road. Based on observations of an arroyo cutbank on the site, cultural deposits are estimated to extend to a depth of about 90 centimeters.

Artifacts: In addition to the artifacts observed and recovered from this site in 1989, one Late Archaic Paisano dart point and one Late Archaic Ensor dart point were recovered during the 2010 survey. Other prehistoric and historic artifacts observed in 2010 are similar to those noted in 1989.

Significance: Based on the degree of disturbance and the paucity of pre-1920s cultural material, site 41PS473 has moderate research potential. This site was designated as an official State Archeological Landmark in 1991.

Recommendations: The Llano Loop to Fresno Creek Trail corridor passes near 41PS473, but the site is outside the view from the trail. Nonetheless, this site should be monitored on an annual basis.

***41PS474***

Site Type: Site 41PS474 is a Paleoindian, Middle Archaic, and Late Prehistoric open campsite, and nineteenth and twentieth century ranch complex.

Site Area: The site measures 210 meters north-south by 120 meters east-west, encompassing 6.23 acres.

Landform: The site is situated at the base of hills, on a relatively level upland landform that is crossed by numerous small arroyos, between two larger unnamed drainages to the east and west.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the area of 41PS474 as Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 4,220 feet AMSL.

Vegetation: Vegetation across 41PS474 is sparse, and includes primarily creosote, ocotillo, and cacti. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion and animal burrowing and trampling. The site is estimated to be approximately 60 percent intact.

Previous Investigations: This site was originally recorded in 1989, during an archeological reconnaissance of BBRSP (Ing et al. 1996). Prehistoric features identified during the 1989 investigation include one tipi ring, three possible Late Prehistoric Cielo features, and three hearths. Nine rock cairns noted during the 1989 survey were identified as probable fence supports. A historic dump was also identified. Prehistoric artifacts observed or recovered from the site in 1989 include chipped stone debitage, cores, unifaces, bifaces, two Middle Archaic Langtry-like dart points, one untyped Archaic dart point, one Late Prehistoric Clifton/Perdiz preform arrow point, and burned rock. Historic artifacts observed within the historic dump suggest that this feature dates after the 1890s, and may represent a single dumping episode. This feature may be associated with the ranchstead at 41PS473.

Present Investigation: Site 41PS474 was re-recorded in 2010. All cultural features identified in 1989 were relocated in 2010, and several additional features were discovered. The prehistoric component consists of one tipi ring, three possible collapsed rock enclosures (possible Cielo features), three burned rock scatters, and 15 hearths. The historic component at 41PS474 is comprised of the aforementioned nine rock cairns that probably functioned as fence supports, and a dump. Most of the relocated features are somewhat more eroded and scattered condition than was reported in 1989. Based on the thin gravelly soils at 41PS474, the maximum depth of cultural deposits at this site is estimated to be less than 10 centimeters.

Artifacts: In addition to the artifacts observed and recovered from this site in 1989, one untyped Paleoindian dart point fragment and one untyped Archaic dart point fragment were collected during the 2010 survey. Other prehistoric artifacts observed in 2010 include chipped stone debitage, cores, bifaces, other chipped stone tools, and firecracked rocks. Historic artifacts noted include yellow ware and whiteware sherds, green, aqua, and solarized bottle glass, hole-in-top cans, a sardine can, and a Colt .45 cartridge.

Significance: Site 41PS474 is unlikely to contain buried cultural deposits, but it does include several cultural features. Among the prehistoric features on the site is a tipi ring, which is a somewhat uncommon feature type in the region. The site has moderate research

potential. This site was designated as a State Archeological Landmark in 1991.

Recommendations: The Llano Loop to Fresno Creek Trail corridor passes near 41PS474, but the site is not visible from the trail. Nonetheless, the site will be monitored on an annual basis.

***41PS475 (Chilicote Spring)***

Site Type: Site 41PS475 is a Late Archaic and Late Prehistoric open campsite, and historic twentieth century goat herding complex.

Site Area: The site measures 420 meters north-south by 330 meters east-west, encompassing 34.26 acres.

Landform: The site is centered around Chilicote Spring, with much of the site situated on the rocky slopes above the spring-fed drainage. Historic chiqueras and a burned rock midden are located on a small terrace on the north side of the drainage.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the 41PS475 site area as 80 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes and 20 percent Bofeccillos-Horsetrap Rock outcrop complex, 1 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges between approximately 4,080 and 4,160 feet AMSL.

Vegetation: Vegetation across 41PS475 consists of dense woody shrubs, mixed grasses, succulents, and cacti adjacent to the drainage, and large cottonwoods in the drainage and at the springs. Surface visibility is approximately 80 percent.

Disturbance: This site has been heavily impacted by erosion, animal burrowing and trampling, construction of an existing ranch road, and possible surface collecting. The site is estimated to be approximately 40 percent intact.

Previous Investigations: Site 41PS475 was originally recorded in 1989, during an archeological reconnaissance of BBRSP (Ing et al. 1996). Prehistoric features identified during the 1989 investigation include mortar holes on both sides of Chilicote Spring, and one burned rock midden with considerable ashy soil eroding into the drainage. Historic features include approximately 90 chiqueras and remnants of three or four rock walls. Prehistoric artifacts observed or recovered from the site in 1989 include chipped stone debitage, three unifacial scrapers, one untyped Archaic dart point, one untyped Late Prehistoric arrow point, and 29 undecorated pottery sherds. Few historic artifacts were observed during the 1989 investigation. Among the historic artifacts were green and brown bottle glass, tin cans, and aluminum beer cans, all of which appeared to date to the late twentieth century.

Present Investigation: Site 41PS475 was re-recorded in 2010. Cultural features identified in 1989 were relocated in 2010. The prehistoric component at this site is comprised of one burned rock midden and three bedrock mortar locales (one isolated mortar and two clusters of three mortars each). The lithic scatter associated with the prehistoric component of 41PS475 is mostly diffuse, but higher densities were observed on the bluff edges above the drainage. The historic component of the site includes the aforementioned chiqueras and rock wall remnants. The rock wall segments connect to natural rock outcrops to create a partially enclosed corral. A very small rock-walled pen is also apparent in the area. A nearby pile of wooden posts may have been used to enclose the pen. Based on the historic artifacts observed at 41PS475, the historic component of the site appears to date to the twentieth

century. Based on the apparent depth of the burned rock midden at this site, it appears that the maximum depth of archeological deposits is about 20 to 25 centimeters.

Artifacts: In addition to the artifacts recovered from 41PS475 in 1989, one Late Archaic Palmillas dart point (Form 2) was recovered during the 2010 survey. Other prehistoric artifacts observed in 2010 include chipped stone debitage (including one obsidian flake), cores, bifaces, scrapers, manos, two portable metates, and firecracked rocks. Historic artifacts include cans, one shell casing marked 'R-P 270 WIN', other unidentified metal fragment, various bottle glass, and one sherd of coarse earthenware. Most of these artifacts appear to date to the 1960s.

Significance: While site 41PS475 has been heavily impacted, the burned rock midden, bedrock mortars, and historic chiqueras at the site remain relatively intact. As a result, the site does retain moderate research potential. The site was designated as a State Archeological Landmark on September 20, 1991.

Recommendations: The Llano Loop to Fresno Creek Trail corridor passes through 41PS475, following an existing ranch road. However, most cultural features, including the burned rock midden and chiqueras, are not visible from the trail route. Nonetheless, the site should be monitored on an annual basis.

***41PS1105***

Site Type: Site 41PS1105 is a Late Archaic and Late Prehistoric lithic scatter, and a historic twentieth century livestock handling complex.

Site Area: The site measures 170 meters northwest-southeast by 200 meters southwest-northeast, encompassing a total area of 8.68 acres.

Landform: Site 41PS1105 is located on and along the margins of a small knoll that rises above the surrounding plain. Minor unnamed drainages dissect the plain in the area.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1105 ranges between 4,280 and 4,300 feet AMSL.

Vegetation: Vegetation across much of site 41PS1105 is a moderately dense cover of woody shrubs and cacti, with sparse patches of grass along drainages. Surface visibility is approximately 70 percent.

Disturbance: This site has been impacted by moderate to severe erosion and animal trampling, as well as the construction of an existing ranch road. The areas around the historic features have been previously bulldozed. A push pile was evident along the eastern boundary of the site. Only about 30 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: Site 41PS1105 was recorded in 2010. The prehistoric component of the site consists of a lithic scatter of moderate density; no prehistoric cultural features were identified. The historic component includes two windmill foundations, the remnants of a former pila, one intact rock and concrete pila, and associated historic artifacts. The intact pila bears multiple inscriptions around the top of the feature, including 'FOWLKES BROSS. AA y FYA' and 'FOWLKES BROSS·CHR.2 ABRIL DE 1943'. Observations of area drainage cutbanks indicate that the depth of archeological deposits at 41PS1105 is less than 10 centimeters.

Artifact Analysis: Artifacts recovered from 41PS1105 are two Late Archaic Shumla dart point fragments, one untyped Archaic dart point, one Late Prehistoric Perdiz arrow point fragment, and one incised calcined bone fragment. Other items observed on the site include chipped stone debitage, and a number of historic artifacts. The historic assemblage includes two square kerosene cans, small juice cans, a sardine can, one molded clear bottle glass with embossed lettering, two brown livestock vaccination bottles, two buckets, an aluminum ladle with iron handle, and various hardware. All historic artifacts appear to date to the first half of the twentieth century.

Significance: Site 41PS1105 has been severely impacted and lacks prehistoric cultural features and intact archeological deposits. The site has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at 41PS1105.

***41PS1106***

Site Type: Site 41PS1106 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 70 meters north-south by 50 meters east-west, encompassing a total area of 0.87 acre.

Landform: Site 41PS1106 is situated on a relatively level llano, north of Papalote Seco. Minor washes dissect this plain.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1106 is approximately 4,320 feet AMSL.

Vegetation: Vegetation in the area of 41PS1106 is sparse and consists primarily of creosote and various opuntias. Surface visibility is approximately 95 percent.

Disturbance: There has been moderate impact to 41PS1106 due to erosion, animal trampling, and the construction of an existing ranch road through the site. The site remains approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1106 was recorded in 2010. This site consists of a small lithic scatter. Based on the thin gravelly soils at this location, it is estimated that the depth of archeological deposits at 41PS1106 is less than 10 centimeters.

Artifacts: Artifacts recorded at 41PS1106 are limited to a small scatter of about 20 pieces of chipped stone debitage and two biface fragments. No items were collected.

Significance: Site 41PS1106 has low research potential, and does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS1107***

Site Type: Site 41PS1107 is a boulder shelter and lithic scatter with Late Archaic and Late Prehistoric components.

Site Area: The site measures 100 meters east-west by 60 meters north-south, encompassing 1.53 acres.

Landform: Site 41PS1107 is located on a series of benches below the west end of a mesa/ridge that overlooks Chilicote Spring. The boul-

der shelter is south-facing, providing broad panoramic views and protection from north winds.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the site area as Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from about 4,200 to 4,300 feet AMSL.

Vegetation: Site 41PS1107 is sparsely covered by mixed grasses, cacti, and succulents, providing 90 percent surface visibility.

Disturbances: This site has been impacted by erosion and animal burrowing and trampling, but remains approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1107 was recorded in 2010. Investigators recorded a boulder shelter, talus deposits, and projectile points on the site. The total length of the boulder shelter is approximately 6 meters. No artifacts were observed within the shelter, but midden-stained soils, burned rocks, and chipped stone artifacts were evident between the shelter and the lower reaches of the site. Based on the thin rocky soil and bedrock exposures in the area, it is estimated that the maximum depth of cultural deposits at 41PS1107 is less than 20 centimeters.

Artifacts: Artfiacts observed on the site include burned rocks, chipped stone debitage, seven cores, four utilized flakes, three bifacial knife fragments, scrapers, six mano fragments, and three portable metate fragments. Collected artifacts consist of one Late Archaic Shumla dart point, one Late Archaic expanding stem dart point (untyped), one Late Prehistoric Perdiz arrow point, one Late Prehistoric arrow point fragment, and one untyped Late Prehistoric Scallorn arrow point fragment.

Significance: Site 41PS1107 is a multi-component site that has produced an abundance and variety of artifacts, including several diagnostic projectile points. The associated talus deposits appear to be largely intact. The site retains at least moderate research potential, and is recommended for designation as an official State Antiquities Landmark under Criteria 1 and 5.

Recommendations: This site will not be directly impacted by use of the present trail, but the boulder shelter is visible from the trail. As a result, 41PS1107 should be monitored at least biannually until there are sufficient data to know whether the monitoring schedule should be increased or decreased. Furthermore, 41PS1107 should be nominated for designation as an official State Antiquities Landmark under Criteria 1 and possibly 5.

***41PS1108***

Site Type: Site 41PS1108 is a Late Prehistoric open campsite and historic artifact concentration.

Site Area: The site measures 80 meters north-south by 60 meters east-west, encompassing 1.23 acres.

Landform: The site is situated on two low knolls and within a gully that separates the two knolls. An unnamed drainage adjoins the southwest part of the site.

Soil Type: Natural Resources Conservation Service soil maps identify soils in the 41PS1108 site area as Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges between approximately 4,170 and 4,190 feet AMSL.

Vegetation: Vegetation across 41PS1108 is a sparse cover of woody shrubs, succulents, and cacti, becoming denser in the gully and

adjacent drainage. Surface visibility is approximately 60 percent.

Disturbance: This site has been minimally impacted by erosion and remains approximately 80 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1108 was recorded in 2010. One cultural feature, a hearth of unknown age, was identified in the northwestern part of the site. The artifact scatter at this site includes both prehistoric and historic items. Prehistoric items are most abundant in the eastern part of the site; however, a single diagnostic projectile point recovered from 41PS1108 was found near the western boundary of the site. A concentration of historic artifacts, measuring 12 by 5 meters, was recorded in the west central part of the site and may represent a temporary camp. Based on the apparent depth of the matrix in the hearth feature, cultural deposits at this site extend to a depth of about 15 centimeters.

Artifacts: The artifact scatter at the site consists of chipped stone debitage, cores, bifaces, scrapers, one portable metate, one Late Prehistoric Perdiz arrow point (collected for curation), and a few possible firecracked rocks. Documented historic artifacts include whiteware, yellow ware, stoneware, and coarse Mexican earthenware sherds, aqua, amber, clear, and solarized bottle glass fragments, hole-in-top cans, a horseshoe, a shell casing marked 'W.R.A. Co. 44 W.C.F.', a shell casing marked 'UMC 45', and other metal items, a milled board, and a groundstone fragment whose function is not known, although it is likely historic, based on the uniformity of the artifact (collected for curation). These items suggest an early twentieth century date for the historic component of 41PS1108

Significance: Site 41PS1108 is largely intact, retaining moderate research potential. However, the site does not appear to meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: Site 41PS1108 is not located near the present trail and is unlikely to attract the attention of trail users. No further work is recommended at this time.

**Chilicote to Crawford-Smith Overlook Trail**

The Chilicote to Crawford-Smith Overlook Trail extends south from Chilicote Spring to Mexicano Falls, and then to Fresno Canyon, south of the Crawford-Smith Ranch site (41PS38; Figure 29). This trail is approximately 6.2 miles in length, and utilizes existing unimproved two-track road (8 feet wide), historic trail, and new trail. Where trail construction is necessary, the maximum width of the trail is three feet.

The Chilicote to Crawford-Smith Overlook Trail corridor was surveyed February 1, 2, and 13 – 16, 2010. A total of 294 acres were surveyed along this trail corridor. Eight previously recorded sites (41PS42–43, 41PS528, 41PS735–737, 41PS743–744) and five newly recorded sites (41PS1109–1113) were investigated during the survey of this trail segment. Site descriptions are below and site summary data can be found in Appendix A. Twelve isolated finds were also identified within this trail corridor (Appendix C).

***41PS42***

Site Type: Site 41PS42 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 160 meters northeast-southwest by 70 meters east-west, encompassing 2.8 acres.

Landform: The site is situated on an upland bench about 100 meters northwest of an un-

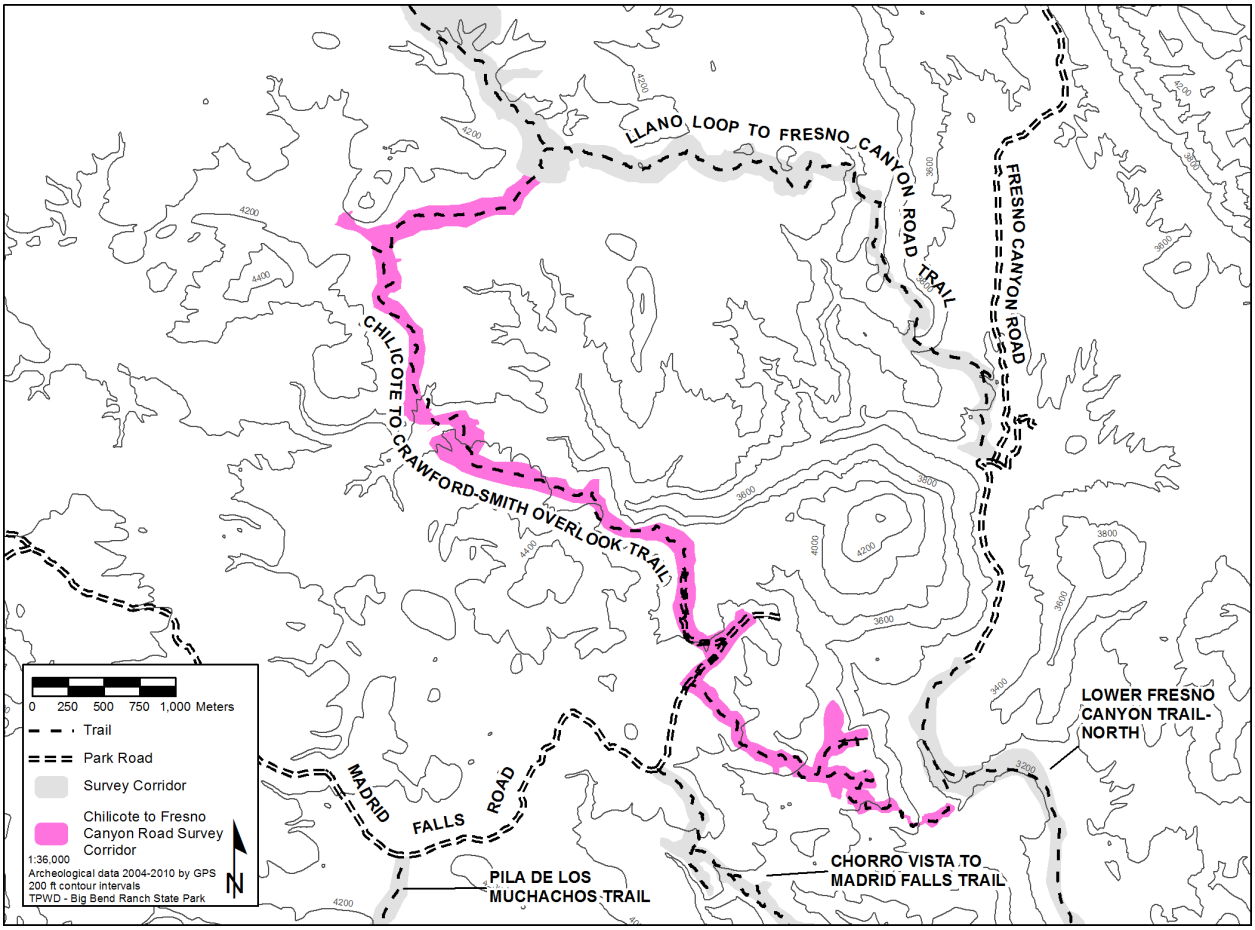


**Figure 29.** Map showing location of Chilicote to Crawford-Smith Overlook Trail.

named drainage which pours off into Fresno Canyon.

Soil Type: Soils in the area of 41PS42 have been mapped by the Natural Resources Conservation Service as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS42 ranges from approximately 3,720 to 3,760 feet AMSL.

Vegetation: Vegetation across 41PS42 includes mixed grasses, cacti, succulents, and woody shrubs. Creosote is moderately dense on the site. Surface visibility is 90 percent.

Disturbance: The site has been impacted by sheet erosion, and appears to be approximately 40 percent intact.

Previous Investigations: This site was originally recorded by Mike McKann in 1973 (McKann 1975:42, 46). The site was revisited by Joseph Sanchez and William A. Cloud in 1997 (Sanchez 1999:44, 46–47).

Present Investigation: Site 41PS42 was re-recorded in 2010. The site consists entirely of a very sparse scatter of lithic artifacts; no cultural features were identified. Based on the thin gravelly soils at this site, the maximum depth of cultural deposits is estimated to be less than 10 centimeters.

Artifacts: Artifacts observed consist of chipped stone debitage and bifaces. No diagnostic artifacts were observed.

Significance: The research value of 41PS42 is considered low; the site does not merit nomination as an official State Antiquities Landmark

Recommendations: The trail is approximately 370 meters south of 41PS42, well away from the site. No further work is recommended at this site.

***41PS43***

Site Type: Site 41PS43 is a Late Archaic and Late Prehistoric lithic scatter with a single apparent Cielo complex feature and cairn.

Site Area: The site measures 240 meters east-west by 200 meters north-south, encompassing 11.9 acres.

Landform: The site is situated on a knoll at the east end of a long ridge. A spring is located 50 meters to the south, but well downslope from the site.

Soil Type: Soils in the area of 41PS43 have been identified as 90 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes and 10 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS43 ranges from approximately 3,750 to 3,770 feet AMSL.

Vegetation: Vegetation across 41PS43 consists of a sparse cover of mixed grasses and cacti, with scattered ocotillo and shrubs. Surface visibility is 60 percent.

Disturbance: Impacts to this site include limited erosion on the slopes, and the previous establishment of a ranch road through the site. A cull pile identified at the east end of the 41PS42 during the 2010 investigation also indicates that surface collecting has occurred on the site. Nonetheless, the site remains approximately 80 percent intact.

Previous Investigations: This site was originally recorded by Mike McKann in 1973 (McKann 1975:42, 46). The site was revisited by Joseph Sanchez and William A. Cloud in 1997 (Sanchez 1999:44, 47, 63–66, 72–73, 76).

Present Investigation: Site 41PS43 was re-recorded in 2010. Cultural features at this site include a circular stacked rock feature that may be a Late Prehistoric Cielo complex habitation feature and a stacked rock cairn of uncertain age. The possible Cielo feature has an exterior dimension of 4.6 meters north-south by 6 meters east-west. Based on the thin soils on the upland landform where 41PS43 is situated, the depth of any buried cultural deposits at this site is estimated to be less than 10 centimeters.

Artifacts: Artifacts recorded at 41PS43 include a variety of chipped stone debitage, cores, bifaces, scrapers, manos and portable metates. Diagnostic artifacts recovered during the 2010 investigation consist of one Late Archaic expanding stem dart point fragment (untyped), one Late Archaic Ensor dart point, one Late Archaic Figueroa dart point, and one Late Prehistoric Cliffton arrow point/Perdiz preform.

Significance: This site retains moderate research value and merits designation as an official State Antiquities Landmark under Criterion 1 (the site has the potential to contribute to a better understanding of the prehistory and/or history ofTexas by the addition of new and important information) and Criterion 2 (the site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site). Additionally, the site merits designation under Criterion 5 because of apparent susceptibility to vandalism.

Recommendations: The present trail follows the existing ranch road through 41PS43. The cultural features at the site are out of view of the road, but flakes are visible along some parts of the road. While this site would benefit from rerouting the trail route, the nature of the landform upon which 41PS43 is situated prevents the practical relocation of the trail. Furthermore, constructing the trail elsewhere would create another scar on the landscape. Instead, it is recommended that 41PS43 be monitored at least quarterly during the first two years of trail use, at which time the monitoring schedule may be adjusted according to the preliminary monitoring results. In addition, this site should be nominated as an official State Antiquities Landmark.

***41PS528***

Site Type: Site 41PS528 is a Late Paleoindian, Middle Archaic, Late Prehistoric, and historic twentieth century campsite and rockshelter occupation with associated rock art.

Site Area: The site measures 120 meters north-south by 110 meters east-west, encompassing 3.3 acres.

Landform: The site is situated on a gravel bench between the south end of a colluvial slope and one of the northern tributaries of Arroyo Segundo.

Soil Type: Soils in the area of 41PS528 have been identified by the NRCS as 50 percent Horsetrap-Bofecillos-Rock outcrop complex, 1 to 12 percent slopes and 50 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS528 ranges from approximately 4,140 to 4,200 feet AMSL.

Vegetation: Vegetation includes mixed grasses, cacti, succulents, and woody shrubs. Creosote is dominant. Surface visibility is 80 percent.

Disturbance: Impacts to this site include erosion, animal burrowing and trampling, previous construction of a ranch road (present trail) through the site, surface collecting, and the placement of minor graffiti among the rock art. Nonetheless, site 41PS528 is considered approximately 60 percent intact.

Previous Investigations: Site 41PS528 was originally recorded in 1990, during an archeological reconnaissance of BBRSP (Ing et al. 1996:216).

Present Investigation: This site was re-recorded in 2010. Recorded cultural features consist of one burned rock midden, 17 bedrock mortars, three bedrock metates, and one boulder shelter that include a rock art panel of red painted images (includes apparent vaquero art). A short rock wall is also evident within the boulder shelter. Extensive midden deposits are associated with these features. The midden deposits at 41PS528 are estimated to extend to a depth of 20 centimeters.

Artifacts: Five points were recovered from the site in 1990: one Late Paleoindian Golondrina point, two Late Prehistoric Paisano dart points, one untyped Archaic dart point, and one Late Prehistoric Harrell arrow point. Artifacts observed at 41PS528 in 2010 include chipped stone debitage, cores, bifaces, scrapers, other chipped stone tools, manos, portable metates, and firecracked rocks, as well as a historic metal and leather bridle, baking powder cans, clear glass fragments, a milled wood fragment, and modern trash. No projectile points were recorded during the 2010 investigation.

Significance: This site retains moderately high research value, and was designated an official

State Archeological Landmark on September 20, 1991.

Recommendations: Site 41PS528 is located approximately 400 meters northwest of the present trail route, and probably will not elicit the attention of trail users. Regardless, this site will be monitored on an annual basis to track the condition of the rock imagery, as well as other cultural features at the site.

***41PS735 (Trap Shelter)***

Site Type: Site 41PS735 is a small rockshelter habitation and associated talus deposit of unknown prehistoric age.

Site Area: The site measures 50 meters north-south by 30 meters east-west, encompassing 0.4 acre.

Landform: The site is located on the upper part of a steep, south-facing slope that overlooks an unnamed intermittent drainage.

Soil Type: Soils in the area of 41PS735 have been identified as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS735 ranges from approximately 3,800 to 3,880 feet AMSL.

Vegetation: There is sparse vegetation on the steep slope below the rockshelter at 41PS735. Vegetation consists of mixed grasses, cacti, and succulents. Surface visibility is 100 percent inside the rockshelter and 60 percent on the talus slope.

Disturbance: Impacts to 41PS735 appear to be limited to moderate to severe erosion on the steep talus slope. The site is estimated to be approximately 60 percent intact.

Previous Investigations: Site 41PS735 was originally recorded in 1996 during an archeological reconnaissance of upper Fresno Canyon (Sanchez 1999:45, 55–56).

Present Investigation: This site was re-recorded in 2010. Cultural features at this site consist of a small rockshelter, associated talus deposits, and a bedrock metate. No artifacts were found inside the rockshelter, but sooting covers about one-third of the shelter ceiling. Based on the thickness of the talus, cultural deposits at 41PS735 are estimated to be as much as 15 centimeters in depth.

Artifacts: Artifacts observed at 41PS735 include chipped stone debitage, cores, bifaces, portable metates, and firecracked rocks. No temporally diagnostic artifacts have been identified at this site.

Significance: This site has moderate research potential, but does not merit nomination as an official State Archeological Landmark.

Recommendations: Site 41PS735 will not be crossed by the proposed trail route in this area, and will not be visible from the trail. No further work is recommended at 41PS735.

***41PS736 (Buena Vista)***

Site Type: Site 41PS736 is a Late Prehistoric Cielo complex habitation site.

Site Area: The site measures 100 meters north-south by 110 meters east-west, encompassing 2.7 acres.

Landform: The site is situated on a finger ridge that is bound by deep canyons to the north and south.

Soil Type: Soils in the area of 41PS736 have been mapped by the NRCS as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS736 ranges from approximately 3,880 to 3,925 feet AMSL.

Vegetation: The site is covered with moderately dense vegetation, predominantly woody shrubs. Other vegetation includes mixed grasses, cacti, and succulents. Surface visibility is 80 percent.

Disturbance: Impacts to 41PS736 include erosion and the previous construction of a ranch road through the area (i.e., present trail); a related dozer pile is evident on the site. The site is estimated to be approximately 70 percent intact.

Previous Investigations: Site 41PS736 was originally recorded in 1996 during an archeological reconnaissance of upper Fresno Canyon (Sanchez 1999:45, 48–50).

Present Investigation: This site was re-recorded in 2010. Cultural features at this site include eight circular stacked rock Cielo structures, one rock pavement, and nine bedrock mortars/metates. A sparse scatter of lithic artifacts is associated with the features. Cultural deposits at 41PS736 appear to be limited to the ground surface based on the presence of bedrock across the site.

Artifacts: Two Late Prehistoric Perdiz arrow points, two Toyah arrow points, and one Livermore arrow point were recovered from the site during the 1996 investigation. Artifacts observed at 41PS736 in 2010 include chipped stone debitage, cores, bifaces, scrapers, and portable metates. No temporally diagnostic artifacts were observed during the 2010 investigation.

Significance: This site has moderate research value, and it merits designation as an official State Antiquities Landmark under Criteria 1 and 2. Additionally, the site merits designation under Criterion 5 because of its potential susceptibility to vandalism.

Recommendations: The trail through this area follows the existing ranch road that crosses 41PS736. This site should be monitored on a quarterly basis during the first two years of trail use. The site monitoring schedule should be reviewed after the first two years of trail use, and revised accordingly. In addition, 41PS736 should be nominated as an official State Antiquities Landmark.

***41PS737 (Jeep Trail Bench)***

Site Type: Site 41PS737 is a lithic scatter attributable to the Late Archaic period.

Site Area: The site measures 70 meters southwest-northeast by 50 meters northwest-southeast, encompassing 0.9 acre.

Landform: The site is located on a low bench at the extreme eastern end of a long and narrow finger ridge.

Soil Type: Soils in the area of 41PS737 have been mapped by the Natural Resource Conservation Series as 70 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes and 30 percent Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS737 ranges from approximately 3,860 to 3,880 feet AMSL.

Vegetation: Vegetation is sparse across much of the site, but is increasingly dense along the eastern and southern boundaries. Vegetation includes mixed grasses, cacti, succulents, and woody shrubs. Surface visibility is 80 percent.

Disturbance: Impacts to 41PS737 include erosion and the previous construction of a ranch road through the area. A cull pile was observed near the northern boundary of the site, indicating that surface collecting has also occurred on the site. The site is estimated to be only about 30 percent intact.

Previous Investigations: Site 41PS737 was originally recorded in 1996 during an archeological reconnaissance of upper Fresno Canyon (Sanchez 1999:45, 47).

Present Investigation: This site was re-recorded in 2010. Cultural resources at this site are limited to a lithic scatter; no other cultural features were observed. Based on the presence of bedrock across the site, archeological deposits at 41PS737 appear to be limited to the ground surface.

Artifacts: One Late Archaic Frio dart point and one untyped Archaic dart point were recovered from 41PS737 during the 1996 investigation. Artifacts observed in 2010 include chipped stone debitage, cores, and bifaces. No projectile points were recovered from the site during the 2010 investigation.

Significance: This site has low research value, and does not merit nomination as an official State Antiquities Landmark.

Recommendations: The trail through this area follows the existing ranch road and crosses 41PS737. Nonetheless, due to the poor condition of this site, and its low research value, no further work is recommended at this site.

***41PS743 (Ocotillo Swale)***

Site Type: Site 41PS743 is an open campsite of possible Early Archaic age.

Site Area: The site measures 130 meters northwest-southeast by 50 meters north-south, encompassing 1.6 acres.

Landform: The site is located on an upland flat near a tributary that feeds into Fresno Canyon.

Soil Type: Soils at 41PS743 have been identified by the NRCS as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS743 is 4,000 feet AMSL.

Vegetation: Vegetation at 41PS743 is sparse, and includes mixed grasses, cacti, succulents, and woody shrubs. Surface visibility is 70 percent.

Disturbance: The site has been impacted by the previous construction of a ranch road through the area; an estimated 60 percent of the site remains intact.

Previous Investigations: Site 41PS743 was originally recorded in 1996 during an archeological reconnaissance of upper Fresno Canyon (Sanchez 1999:45, 47).

Present Investigation: This site was re-recorded in 2010. Cultural resources identified at 41PS743 are limited to two hearths and a sparse scatter of associated artifacts. Archeological deposits at the site are estimated to be no more than 10 centimeters in thickness based on the presence of exposed bedrock in the area.

Artifacts: A Big Sandy-like dart point of possible Early Archaic age was collected from the site during the 1996 investigation. Artifacts observed at 41PS743 in 2010 include chipped stone debitage, cores, bifaces, and portable metates. No projectile points were recovered during the 2010 investigation.

Significance: This site has moderately low research potential, and does not merit designation as an official State Antiquities Landmark.

Recommendations: The trail through this area follows the existing ranch road that crosses 41PS743. However, the two hearths at this site are out of view of the trail/road, and the site is unlikely to elicit the attention of trail users. No further work is recommended at this site.

***41PS744 (Standing Rock)***

Site Type: Site 41PS744 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 50 meters northwest-southeast by 30 meters northeast-southwest, encompassing 0.4 acre.

Landform: The site is located on the north side of a gently sloping hill that leads down to a basin-like swale.

Soil Type: Soils at 41PS744 have been identified by the NRCS as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS744 is 4,000 feet AMSL.

Vegetation: Vegetation at 41PS744 is sparse and dominated by creosote. Other vegetation includes mixed grasses, cacti, and other woody shrubs. Surface visibility is 80 percent.

Disturbance: Impacts to the site are limited to an existing undeveloped two-track road that crosses the site. It is estimated that 41PS744 is approximately 70 percent intact.

Previous Investigations: Site 41PS744 was originally recorded in 1996 during an archeological reconnaissance of upper Fresno Canyon (Sanchez 1999:46, 53).

Present Investigation: This site was re-recorded in 2010. There are two vertical trachyte rocks on 41PS744 that have small areas of polish on upper portions of the rocks, but it is possible that these represent animal rubs rather than cultural features. No other cultural features were observed on this surface site, and there is a paucity of artifacts.

Artifacts: Artifacts observed at 41PS744 during the 2010 investigation include chipped stone debitage, one exhausted core, one unifacial scraper, and three utilized flakes. No diagnostic artifacts have been identified at this site.

Significance: The research value of 41PS744 is low, and the site does not merit designation as an official State Antiquities Landmark.

Recommendations: As previously noted, an existing two-track road (present trail) crosses 41PS744. The trail extends cross-country from the west, before entering the two-track road about 40 meters southwest of 41PS744 and following the road to the southwest. The trail route does not follow the two-track road across the site itself, and the site is not visible from the trail route. No further work is recommended at site 41PS744.

***41PS1109***

Site Type: Site 41PS1109 is a Late Archaic open campsite.

Site Area: The site measures approximately 70 meters northwest-southeast by 40 meters southwest-northeast, encompassing 0.7 acre.

Landform: The site is situated on the lower slope of a low ridge, between a small wash to the east and a somewhat larger drainage to the west.

Soil Type: Soils in the area of 41PS1109 are identified as Horsetrap-Bofecillos-Rock outcrop complex, 5 to 12 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1109 ranges from 4,080 to 4,100 feet AMSL.

Vegetation: Vegetation at the site is sparse and includes mixed grasses and cacti. Surface visibility is 90 percent.

Disturbance: This site has been impacted by erosion and animal trampling and burrowing, and is estimated to be only 40 percent intact.

Previous Investigations: None.

Present Investigation: This site was recorded in 2010. A scatter of firecracked rocks, measuring approximately 17 meters east-west by 13 meters north-south, was recorded on the lowest part of the site. In addition, a hearth feature, measuring approximately 60 centimeters in diameter, was observed beginning to erode into one of the washes. The site contains a moderately high amount and variety of lithic artifacts and materials for a relatively small site. Deposits are estimated to be less than 20 centimeters.

Artifacts: Artifacts recorded at 41PS1109 include chipped stone debitage, utilized flakes, bifaces, scrapers, and firecracked rocks. One Late Archaic Shumla dart point fragment and one Mexican dart point of possible Late Archaic age were collected.

Significance: The research value of 41PS1109 is considered moderately low and does not merit designation as an official State Antiquities Landmark.

Recommendations: Site 41PS1109 is located west of the present trail and is unlikely to attract the attention of trail users. No further work is recommended at this site.

***41PS1110***

Site Type: Site 41PS1110 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 100 meters southwest-northeast by 50 meters east-west, encompassing 1.2 acres.

Landform: The site is located on a small T1 terrace of an unnamed drainage. A small waterfall is located within the site boundary.

Soil Type: Soils in the area of 41PS1110 have been mapped by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1110 ranges from 3,720 to 3,740 feet AMSL.

Vegetation: Vegetation at the site is moderately dense, and includes mixed grasses, cacti, and succulents. Surface visibility is 70 percent.

Disturbance: Impacts to 41PS1110 include extensive erosion; only about 20 percent of the site remains intact.

Previous Investigations: None.

Present Investigation: This site was recorded in 2010. The investigation identified a small surface scatter of lithic artifacts at this location. No cultural features or firecracked rocks were evident, and there was no evidence of subsurface deposits.

Artifacts: The artifact assemblage at 41PS1110 includes chipped stone debitage, one thick oval biface, and one portable metate. No temporally diagnostic artifacts were observed at the site.

Significance: Site 41PS1110 has low research value, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: The present trail extends through the southeast edge of 41PS1110, but the small portion of this site that remains intact is unlikely to draw the attention of trail users. No further work is recommended at 41PS1110.

***41PS1111***

Site Type: Site 41PS1111 is a lithic scatter of unknown prehistoric age, and a twentieth century ranching complex.

Site Area: The site measures approximately 70 meters east-west by 40 meters north-south, encompassing 0.7 acre.

Landform: The site is located on a high bench overlooking the south bank of Arroyo Segundo.

Soil Type: The site is located within an area of soils identified as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1111 ranges from 3,890 to 3,910 feet AMSL.

Vegetation: Vegetation at the site is sparse and predominantly creosote. Mixed grasses are also present. Surface visibility is 70 percent.

Disturbance: Disturbance to 41PS1111 is limited to minimal erosion. The site remains approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: This site was recorded in 2010. The investigation revealed approximately 50 historic chiqueras and no other historic or prehistoric cultural features. A small, sparse lithic scatter was also present. Based on the thin gravelly soil in the area, the depth of archeological deposits at 41PS1111 is estimated to be less than 10 centimeters.

Artifacts: The artifact assemblage at 41PS1111 is limited to chipped stone debitage and one thin biface.

Significance: Site 41PS1111 has low research value, and is not recommended for designation as an official State Antiquities Landmark.

Recommendations: This site is approximately 80 meters east of the present trail and is unlikely to elicit the attention of trail users. No further work is recommended at 41PS1111.

***41PS1112***

Site Type: Site 41PS1112 is a lithic scatter of unknown prehistoric age, and a probable historic rock cairn.

Site Area: The site measures 130 meters east-west by 80 meters north-south, encompassing 2.6 acres.

Landform: The site is located on a flat bench midway down a steep southeast sloping hill.

Soil Type: Soils in the area of 41PS1112 have been identified as 90 percent Terlingua-Rock outcrop complex, 20 to 70 percent slopes and 10 percent Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1112 ranges from 3,560 to 3,610 feet AMSL.

Vegetation: Vegetation at the site is sparse, and includes mixed grasses, cacti, and woody shrubs. Surface visibility is 90 percent.

Disturbance: Site 41PS1112 has been impacted by erosion, and is estimated to be approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: This site was recorded in 2010. This site consists of a sparse lithic scatter of unknown prehistoric age and a rock cairn of probable historic age. No sediment was evident around the base of the cairn, and the exterior rocks appeared to be arranged. In addition, one historic artifact, described below, was observed on the site. Early twentieth century maps of the area show a historic trail route through the site area. Based on thin stony soils and bedrock exposures in the site area, the thickness of archeological deposits at 41PS1112 is estimated to be less than 10 centimeters.

Artifacts: The lithic scatter at 41PS1112 consists of chipped stone debitage, cores, bifaces, scrapers, and three portable mutates. No temporally diagnostic prehistoric artifacts were evident. One possible coarse Mexican earthenware sherd with a salted lead glaze interior was recovered from the site for curation. No other historic artifacts were observed at the site.

Significance: Site 41PS1112 has low research value, and does merit nomination as an official State Antiquities Landmark.

Recommendations: The present trail follows a historic trail route through 41PS1112. Nonetheless, no further work is recommended at this site.

***41PS1113***

Site Type: Site 41PS1113 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures 160 meters east-west by 80 meters north-south, encompassing 3.2 acres.

Landform: The site is centered on a low knoll and extends to the west and southwest of the knoll.

Soil Type: Soils in the area of 41PS1113 have been mapped by the NRCS as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1113 ranges from 4,070 to 4,080 feet AMSL.

Vegetation: Vegetation at the site is sparse, and includes mixed grasses, cacti, and woody shrubs. Surface visibility is 80 percent.

Disturbance: Impacts to 41PS1113 include erosion, animal burrowing and trampling, and previous construction of a ranch road through the site (bulldozed). The site is estimated to be 70 percent intact.

Previous Investigations: None.

Present Investigation: This site was recorded in 2010. This site consists of a very sparse lithic scatter of unknown prehistoric age. Few artifacts were observed on this surface site, and no cultural features were present.

Artifacts: The lithic scatter at 41PS1113 includes chipped stone debitage, utilized/modified flakes, and one mano. No diagnostic artifacts were recorded on the site.

Significance: This site has low research value, and does not warrant designation as an official State Antiquities Landmark.

Recommendations: The present trail follows the existing ranch road through site 41PS1113. Regardless, no further work is recommended at this site.

**Chorro Vista to Madrid Falls Trail**

The Chorro Vista to Madrid Falls Trail segment, including a Madrid Falls overlook, is 1.95 miles in length and about 3 feet wide. Although portions of this trail followed existing social trails, the entire route is considered new trail construction for the purposes of the present archeological investigation (Figure 30).

The Chorro Vista to Madrid Falls Trail was surveyed February 16 – 18, 2010. A total of 64 acres were surveyed along the corridor. Four previously recorded archeological sites (41PS30, 41PS46-47, 41PS745) and two newly discovered sites (41PS1114-1115) were recorded along this trail corridor. Site descriptions are below. Site summary data can be found in Appendix A. Five isolated finds were documented along the trail corridor (Appendix C).

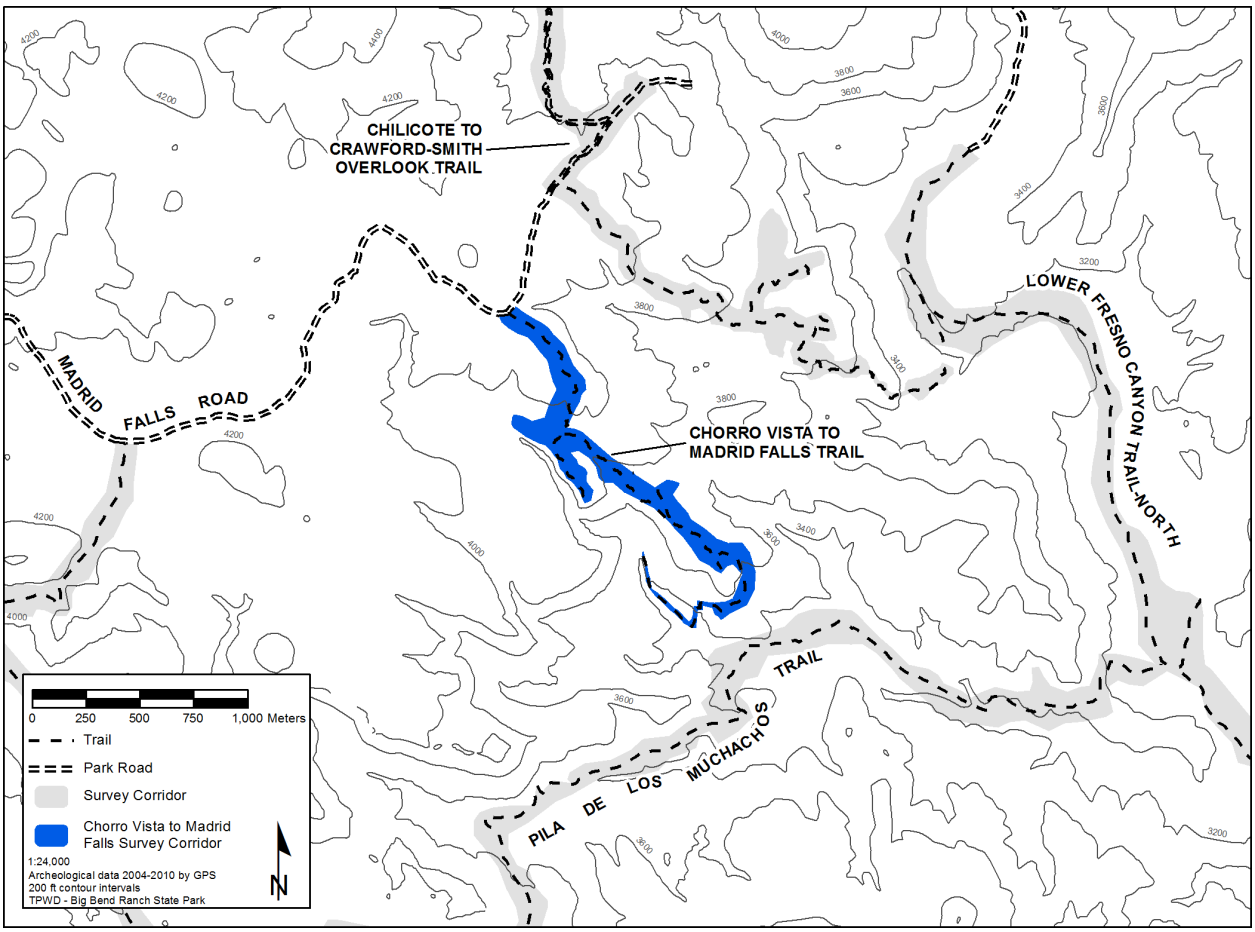


**Figure 30.** Map showing location of Chorro Vista to Madrid Falls Trail.

***41PS30***

Site Type: Site 41PS30 is an open campsite with undetermined Archaic and Late Prehistoric components.

Site Area: The site measures approximately 410 meters northwest-southeast by a maximum dimension of 20 meters east-west, encompassing two acres.

Landform: The site is situated on a T1 terrace overlooking the Chorro Canyon drainage.

Soil Type: Soils in the area of 41PS30 have been identified as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS30 ranges from 3,360 to 3,440 feet AMSL.

Vegetation: Vegetation at the site includes mixed grasses, cacti, woody shrubs, and trees. Surface visibility is 70 percent.

Disturbance: Impacts to 41PS30 include erosion, construction of an existing ranch road through the site, and possibly surface collecting. The site is estimated to be about 60 percent intact.

Previous Investigations: This site was originally recorded by the Texas General Land Office in 1973, during an archeological survey of Chorro(b) Canyon (GLO 1973). The site was reported again in 1975 and in 1976 (Hudson 1976b; McKann 1975).

Present Investigation: Site 41PS30 was re-recorded in 2010. One boulder metate, scattered burned rocks, and associated chipped stone artifacts were observed at this location; however, the previously reported burned rock midden and possible bedrock mortars at 41PS30 were not identified in 2010. Based on alluvial deposition on the terrace upon which 41PS30 is situated, archeological deposits at the site could extend to a depth of as much as 50 centimeters.

Artifacts: Artifacts observed at 41PS30 during the 2010 investigation consist of chipped stone debitage, one biface, one scraper, two utilized flakes, and one basin metate fragment. Although an unidentified dart point fragment and an arrow point fragment were recovered from the site in 1973, no projectile points were found during the 2010 investigation.

Significance: Site 41PS30 has moderate research potential, but does not meet criteria for designation as an official State Antiquities Landmark.

Recommendations: The Chorro Vista to Madrid Falls trail is approximately 200 meters northeast of 41PS30. There are plans to close the canyon below Madrid Falls, including the location of 41PS30, to public access. As a result, no further work is recommended at 41PS30 at this time.

***41PS46***

Site Type: Site 41PS46 is a rockshelter with associated talus deposits and pictographs, and undetermined Archaic and early twentieth century cultural components.

Site Area: The site measures approximately 20 meters north-south by 30 meters east-west, encompassing 0.15 acre.

Landform: The site is located at the base of a bluff on the upper slope of Chorro Canyon. Associated talus deposits extend to the bottom of the canyon.

Soil Type: Soils in the 41PS46 site area have been identified by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS46 ranges from 3,840 to 3,870 feet AMSL.

Vegetation: Vegetation at the site includes a moderately dense cover of mixed grasses, cacti, and woody shrubs. Surface visibility is 70 percent.

Disturbance: Impacts to 41PS46 include erosion, the construction of an existing ranch road through a portion of the site, animal trampling, and possible artifact collecting. Nonetheless, the prehistoric component of the site is estimated to remain approximately 60 percent intact, while the historic component is 80 percent intact.

Previous Investigations: This site was originally recorded in 1973, during an archeological survey of Chorro(b) Canyon (McKann 1975; McKann, et al. 1973). The site was reported again in 1976 (Hudson 1976b).

Present Investigation: Site 41PS46 was re-recorded in 2010. The rockshelter at this site measures 3 meters wide, by 4 meters deep, and 1.8 meters high, and appears to have been intensively occupied in prehistoric times, based on the density of firecracked rocks and the presence of at least six metates, as well as a number of chipped stone artifacts. The rockshelter also includes two red pictographs representing possible anthropomorphic figures. The historic occupation at 41PS46 is represented by a small pen that was created by placing a rock wall and fence sections across the en-

trance of the rockshelter. At least two metates were incorporated into the rock wall. Several historic artifacts are also evident. Based on the thin rocky soil in the area, the archeological deposits at 41PS46 are estimated to be no more than 10 centimeters thick.

Artifacts: Prehistoric artifacts observed at 41PS46 during the 2010 investigation include chipped stone debitage, cores, manos, six metates, and firecracked rocks. No projectile points were recovered during the 2010 investigation, but three unidentified projectile point fragments and one biface fragment were collected during the 1973 investigation. Historic artifacts documented at the site include two thick, interior glazed earthenware sherds, collected in 1973. Cans and other metal items were noted.

Significance: Site 41PS46 has moderately high research value, and merits designation as an official State Antiquities Landmark under Criteria 1, 2, and 3. In addition, the site meets Criterion 5 because of its susceptibility to vandalism.

Recommendations: The present trail follows an existing ranch road through the northeastern edge of the site. In addition, the rockshelter at 41PS46 is visible from the trail. As a result, this site should be nominated as an official State Antiquities Landmark and monitored at least quarterly over the next two years. The monitoring schedule may be re-evaluated at that time and adjusted accordingly. Any diagnostic artifacts encountered at 41PS46 while monitoring will be recovered from the site and curated at the TPWD Archeology Laboratory, Austin.

***41PS47***

Site Type: Site 41PS47 is a Middle Archaic, Late Archaic, and Late Prehistoric Cielo complex open campsite.

Site Area: The site measures approximately 550 meters northwest-southeast by 50 to 100 meters east-west, encompassing about 6.8 acres.

Landform: The site is located on the eastern Chorro Canyon rim.

Soil Type: Soils in the area of 41PS47 have been identified as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS47 ranges from 3,840 to 3,920 feet AMSL.

Vegetation: Vegetation at the site includes a moderately dense cover of mixed grasses, cacti, and woody shrubs. Surface visibility is 90 percent.

Disturbance: The site has been impacted by erosion, animal burrowing and trampling, and surface collecting, but is estimated to remain approximately 70 percent intact.

Previous Investigations: This site was originally recorded in 1973, during an archeological survey of Chorro(b) Canyon (McKann 1975; McKann, et al. 1973). The site was reported again in 1976 (Hudson 1976b).

Present Investigation: Site 41PS47 was re-recorded in 2010. This site includes numerous cultural features. Within the northern portion of the site, one possible Cielo feature, two rock cairns (including one that has historic inscriptions and is associated with a fence), and remnants of two fences (including a standing segment of barbed wire fence and one fence remnant of which only rock cluster post supports remain) were identified. The southern half of the site is situated on a rocky ridge, and appears to include only prehistoric resources. Within this area of the site, 23 probable Cielo structures, including two rock clusters and a

stone pavement, were identified, as were 14 non-portable metates. Fourteen of the Cielo structures are rock alignments that could not be fully discerned. Also, a number of the Cielo structures incorporate bedrock and in situ boulders into their walls. A triangular feature of stacked rocks noted during the 1975 investigation of 41PS47 was not relocated during the 2010 investigation. A widely dispersed lithic scatter of sparse to moderate density is evident across the site. The thickness of the archeological deposit at this site is estimated to be less than 30 centimeters.

Artifacts: Three unidentified dart points were recovered for curation during the 1973 investigation, and one unidentified Late Archaic dart point was observed in 1975. Artifacts observed at 41PS47 during the 2010 investigation include chipped stone debitage, cores, bifaces, scrapers, utilized flakes, one chopper, two basalt manos, 16 portable metates, and firecracked rocks, as well as one horseshoe. One Middle Archaic Jora dart point, one Late Archaic Palmillas dart point (Form 2), one Late Archaic Ellis/Hueco dart point, one Late Archaic expanding stem dart point fragment (untyped), and one Late Prehistoric Scallorn arrow point fragment were recovered in 2010 for curation.

Significance: Site 41PS47 has moderately high research value, and merits designation as an official State Antiquities Landmark under Criterion 1 (potential to contribute important information) and Criterion 2 (integrity). In addition, the site meets Criterion 5 because of its susceptibility to vandalism.

Recommendations: Given the location of 41PS47 near Madrid Falls, the social trails that are apparent across this site, and the presence of cull piles, this site has probably been surface collected for many years. Because Madrid Falls will continue to attract park visitors, and because there is no good way to avoid 41PS47 when approaching the northeastern edge of Chorro Canyon to view the falls, a formal overlook trail and viewing area is recommended. This overlook trail should avoid the cultural features at 41PS47, but perhaps come close to one or two of the circular stacked rock Cielo features, which could be interpreted through signage or a trail brochure. Site interpretation has been shown to effectively deter vandalism to such resources (cf. Donald 2003). In addition, this site should be monitored at least quarterly for the next two years, at which time the monitoring schedule may be re-evaluated. All temporally diagnostic artifacts encountered at 41PS47 during monitoring activities should be recovered from the site for curation. This site should be nominated for designation as an official State Antiquities Landmark.

***41PS745 (Jeep Trail Bend)***

Site Type: Site 41PS745 is an Early Paleoindian, Late Archaic, and twentieth century artifact scatter.

Site Area: The site measures approximately 60 meters north-south by 40 meters east-west, encompassing 0.6 acre.

Landform: The site is located on the southwest slope of a low ridge, within a small flat area.

Soil Type: Soils in the area of 41PS745 have been identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation of 41PS745 ranges from 4,030 to 4,040 feet AMSL.

Vegetation: Vegetation at the site is sparse, and includes cacti, succulents, and woody shrubs. Creosote is predominant. Surface visibility is 80 percent

Disturbance: The site has been impacted by erosion, and animal trampling and burrowing. An estimated 40 percent of 41PS745 remains intact.

Previous Investigations: Site 41PS745 was originally recorded in 1996 during an archeological reconnaissance of upper Fresno Canyon (Sanchez 1999:46).

Present Investigation: Site 41PS745 was re-recorded in 2010. The site consists entirely of a thin scatter of prehistoric and historic artifacts. No cultural features were previously identified on the site and none were observed during the present investigation. Based on the thin gravelly soils in the area, the thickness of the archeological deposit is estimated to be less than five centimeters.

Artifacts: One Late Archaic Shumla-like dart point was collected from the site during the 1996 investigation. Prehistoric artifacts observed at 41PS745 during the 2010 investigation include chipped stone debitage (primarily tertiary flakes), bifaces, and one portable metate. One Early Paleoindian Clovis point base was recovered. Historic artifacts observed on the site include one Prince Albert can and thee fragments of thick aqua glass.

Significance: Despite the recovery of a Clovis point base from 41PS745, the site has low research potential and does not merit designation as an official State Antiquities Landmark, as the Clovis point base is believed to be an isolated find, unassociated with the Late Archaic and Historic artifact scatter.

Recommendations: Site 41PS745 is located approximately 20 meters from the present trail, and is not visible from the trail route. No further work is recommended at this site.

***41PS1114***

Site Type: Site 41PS1114 is a lithic scatter that dates to the Early Archaic, Late Archaic, and Late Prehistoric periods (possibly Toyah phase).

Site Area: The site measures approximately 160 meters north-south by 80 meters east-west, encompassing 3.2 acres.

Landform: The site is situated on the northeast slope of a northwest-southeast ridge that parallels Chorro Canyon.

Soil Type: Soils in the area of 41PS1114 have been identified as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1114 ranges from 3,720 to 3,740 feet AMSL.

Vegetation: Vegetation at the site is sparse, and includes mixed grasses, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: The site has been impacted by erosion and surface collecting (a cull pile was evident along the northwest site boundary), but remains approximately 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1114 was recorded in 2010. The site consists entirely of a large lithic scatter, with a concentration of lithic debitage and debris in the southwest part of the site. Four dart points were recovered from this same area of the site. No cultural features were observed. Based on the presence of exposed bedrock on the site, the thickness of the archeological deposit is estimated to be less than 10 centimeters.

Artifacts: One Early Archaic Pandale, one Late Archaic Palmillas (Form 2), and two untyped dart point fragments were recovered from the

site for curation. Other artifacts observed on the site include chipped stone debitage (primarily secondary and tertiary flakes), utilized flakes, three exhausted cores, bifaces, scrapers, three utilized prismatic blades, and one portable metate.

Significance: Site 41PS1114 has moderately low research value, and does not merit designation as an official State Antiquities Landmark.

Recommendations: The present trail is 40 meters southwest of 41PS1114, and the site is not obvious from the trail route. No further work is recommended at this site.

***41PS1115***

Site Type: Site 41PS1115 is a Middle and Late Archaic lithic scatter.

Site Area: The site measures approximately 60 meters north-south by 80 meters east-west, encompassing 1.2 acres.

Landform: The site is located on a bench overlooking Chorro Canyon.

Soil Type: Soils in the area of 41PS1115 have been identified as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS1115 ranges from 3,700 to 3,740 feet AMSL.

Vegetation: Vegetation at the site is sparse, and includes mixed grasses, succulents, and woody shrubs. Surface visibility is 90 percent.

Disturbance: The present trail, which follows a historic trail route, crosses 41PS1115. The site has been impacted by erosion, and animal trampling and burrowing, and is estimated to be approximately 50 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1115 was recorded in 2010. The site consists of a moderately dense lithic scatter. In addition, one historic rock cairn was noted on the site. Based on the presence of exposed bedrock on the site, the thickness of the archeological deposit is estimated to be less than 10 centimeters.

Artifacts: The artifact assemblage at 41PS1115 includes dart points, chipped stone debitage, one abrader (recovered for curation), and one mano. One Middle Archaic contracting stem dart point fragment (untyped), two Late Archaic Palmillas dart point fragments (Form 1), and one Late Archaic Shumla dart point fragment were recovered for curation.

Significance: Site 41PS1115 has low research value, and does not merit designation as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

**Lower Government Road Trail**

About 1.5 miles of a historic road known as the Lower Government Road was surveyed in 2010. This portion of the Lower Government Road averages approximately eight feet in width (Figure 31). The survey of this portion of the Lower Government Road Trail was conducted on February 21, 2010 and covered 91 acres. Three newly discovered sites were recorded (41PS1116–1118) along this trail corridor. The site description is below and the site summary is in Appendix A. In addition, four isolated finds were identified within the survey corridor (Appendix C).

***41PS1116***

Site Type: Site 41PS1116 is a lithic scatter of unknown prehistoric age, and a 1960s campsite.

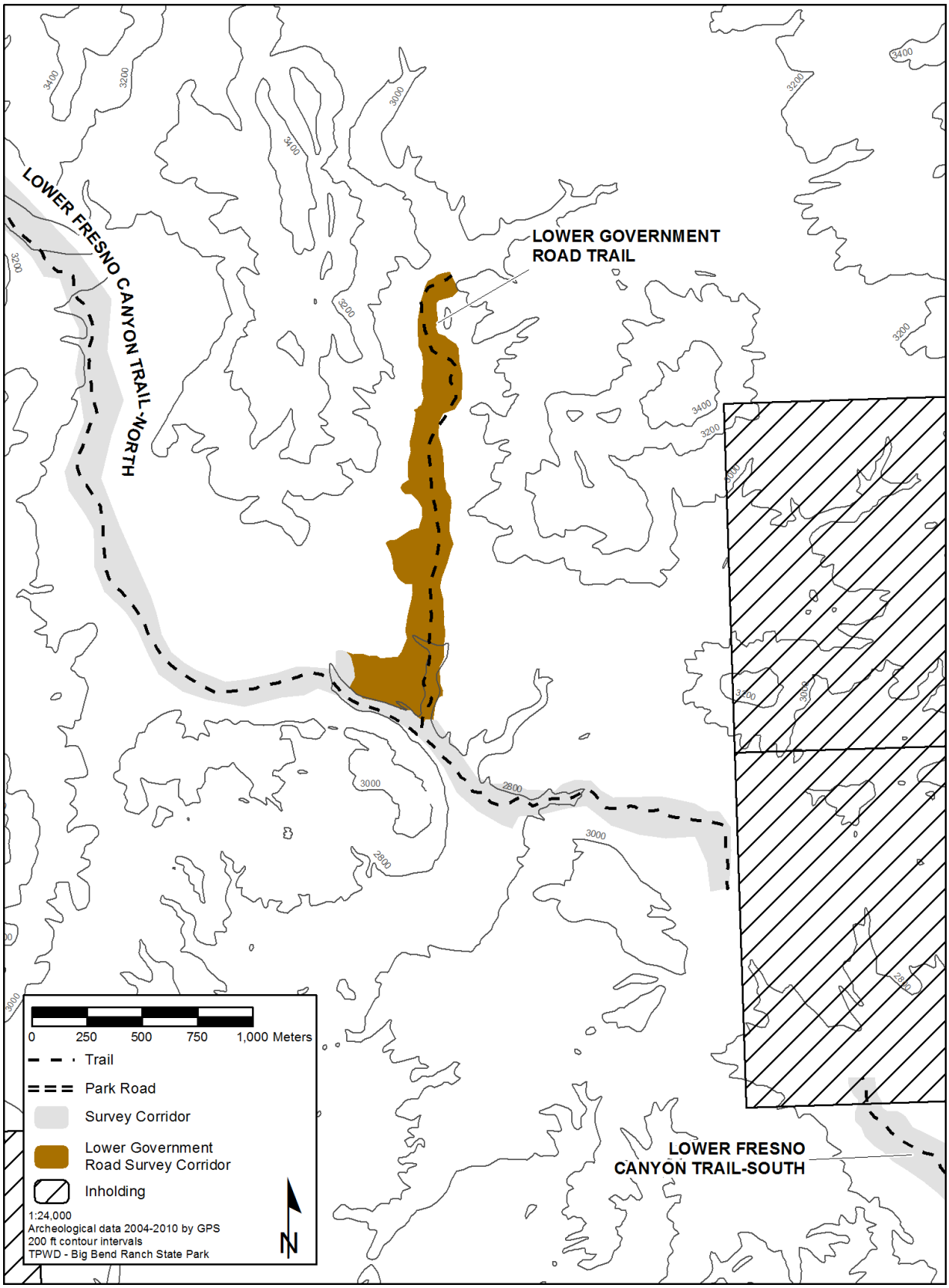


**Figure 31.** Map showing location of Lower Government Road Trail.

Site Area: The site measures approximately 720 meters north-south by 120 meters east-west, encompassing 21.3 acres.

Landform: The site is located on a high terrace on the east side of Lower Shutup Creek, with hills to the east and deeply channeled gullies to the north and south.

Soil Type: Site 41PS1116 is situated within an area of soils identified as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of 41PS1116 is 2,880 feet AMSL.

Vegetation: Vegetation at the site is very sparse, and includes cacti and woody shrubs. Surface visibility is 90 percent.

Disturbance: The site has been impacted by erosion, animal trampling and burrowing, and the construction of the Government Road (the present trail) in the early twentieth century. The site is estimated to be approximately 60 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1116 was recorded in 2010. The site consists of a large lithic scatter, three modern hearths, and a rock alignment that probably represents a modern tent ring. The modern features are accompanied by a variety of 1960s artifacts, described below. Based on the presence of thin gravelly soils across the site, the depth of archeological deposits is estimated to be less than five centimeters.

Artifacts: The artifact assemblage at 41PS1116 includes chipped stone debitage, cores, bifaces, scrapers, and utilized/modified flakes. Items related to the 1960s campsite include clear Dr. Pepper and Coca Cola bottle glass, brown bottle glass, various tin cans, aluminum foil, and shell casings.

Significance: Site 41PS1116 has low research value, and does not merit nomination as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS1117***

Site Type: Site 41PS1117 is a lithic scatter of unknown prehistoric age.

Site Area: The site measures approximately 250 meters north-south by 180 meters east-west, encompassing 11.1 acres.

Landform: The site is located on a Quaternary terrace on the west side of Lower Shutup Creek.

Soil Type: Soils at 41PS1117 have been identified by the NRCS as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of 41PS1117 ranges from 2,820 to 2,880 feet AMSL.

Vegetation: Vegetation at the site is sparse, and includes cacti, succulents, and woody shrubs. Surface visibility is 80 percent.

Disturbance: The site has been impacted by erosion, and animal trampling and burrowing, and is estimated to be only about 40 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1117 was recorded in 2010. The site consists of a large lithic scatter. No cultural features were identified on the site. Based on the presence of thin gravelly soils across the site, the depth of archeo-

logical deposits is estimated to be less than 20 centimeters.

Artifacts: Artifacts noted at 41PS1117 include chipped stone debitage, cores, bifaces, and two portable metates. No temporally diagnostic artifacts were observed.

Significance: Site 41PS1117 has low research value, and does not warrant nomination as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

***41PS1118***

Site Type: Site 41PS1118 is an open campsite of unknown prehistoric age, and a twentieth century ranching site.

Site Area: The site measures approximately 190 meters north-south by 80 meters east-west, encompassing 3.7 acres.

Landform: The site is situated on a terrace on the bend of Lower Shutup Creek, between valley walls.

Soil Type: Site 41PS1118 is situated within an area of soils identified as Riverwash and Pantera soils, 0 to 2 percent slopes, frequently flooded (USDA 2013).

Elevation: The elevation of 41PS1118 ranges from 2,800 to 2,840 feet AMSL.

Vegetation: Vegetation at the site is moderately dense, and includes cacti, succulents, and woody shrubs. Surface visibility is 70 percent.

Disturbance: The site has been impacted by severe erosion and the construction of the Government Road (the present trail) in the early twentieth century. The site is estimated to be only about 30 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1118 was recorded in 2010. Prehistoric features consist of two hearths, two burned rock middens, and two burned rock scatters. Historic features include one limestone slab cluster of unknown function. A large scatter of prehistoric and historic artifacts is evident across the site, with the prehistoric artifacts being concentrated around the burned rock features. The function of the historic component of this site is unknown, but may be residential based on the presence of the limestone slab cluster (floor?), a metal utensil handle, tin cans, and bottle glass (described below). Observations of an animal burrow on the site indicate that the depth of archeological deposits at 41PS1118 is approximately 50 centimeters.

Artifacts: The prehistoric artifact assemblage at 41PS1118 is comprised of chipped stone debitage, cores, bifaces, one portable metate, and firecracked rocks. No temporally prehistoric artifacts were observed. Historic artifacts noted at this site include tin cans (including Prince Albert cans), bottle glass, a barrel hoop, metal utensil handle, horseshoe, crown caps, and large nails, as well as other items.

Significance: Site 41PS1118 has low research value, and does not merit nomination as an official State Antiquities Landmark.

Recommendations: No further work is recommended at this site.

## SITES LOCATED OUTSIDE TRAIL CORRIDORS

Twelve sites and one isolated find were recorded outside the trail corridors. The isolated find is described in Appendix C.

***41PS191 (Auras Bluff)***

Site Type: Site 41PS191 is an extensive rock overhang with rock imagery, and related ar-

cheological deposits. The site includes Archaic, Late Prehistoric, and Historic cultural components (based on rock art styles and the presence of corn cobs).

Site Area: The site measures about 290 meters northeast-southwest by about 100 meters northwest-southeast, encompassing a total area of 7.16 acres (Figure 32).

Landform: Rock imagery, including numerous pictographs and a lesser number of petroglyphs, is evident along an extensive rock overhang of volcanic tuff on the east side of Auras Canyon. Archeological deposits extend from the base of this overhang to a point approximately 40 meters downslope towards the Auras Canyon drainage.

Soil Type: Soils in the area of 41PS191 have been mapped by the NRCS as Terlingua-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of 41PS191 ranges between 3,800 feet and 3,960 feet AMSL.

Vegetation: Vegetation below the base of the rock overhang at 41PS191 includes mixed grasses, creosote, small hackberry, and prickly pear, providing approximately 30 percent surface visibility. The base of the rock overhang is mostly free of vegetation, providing 100 percent surface visibility.

Disturbance: The rock imagery at 41PS191 has been impacted by spalling and weathering, while the archeological deposits have been impacted by erosion, burrowing animals, access by livestock and park visitors, surface collecting and looting. The site is estimated to be about 60 percent intact.

Previous Investigations: Site 41PS191 was originally recorded in 1975, during the Natural Area Survey of the Bofecillos Mountains, a project that was co-sponsored by the University of Texas and the Texas Historical Commission (Baskin 1976b:154, 164, 166–167). After the acquisition of the Big Bend Ranch property by TPWD in 1988, site 41PS191 was revisited during an archeological reconnaissance of the property (Ing et al. 1996:86–88, 216). The Texas Archeological Society Rock Art Task Force conducted intensive documentation of much of the rock imagery at 41PS191 in 1993, including scaled line drawings, photographs, and written descriptions.

Present Investigation: Site 41PS191 was re-recorded in 2008 during the archeological survey of proposed trails in the Bofecillos area of BBRSP. The site includes a massive rock overhang and extensive talus deposits. The talus contains very dark gray midden soil and a considerable amount of artifacts, described in the following section. Based on the thickness of the talus deposits, it is estimated that the archeological deposits extend to a depth of approximately one meter. In addition to the cultural deposits, several boulder mortars, cupules, and grinding surfaces are evident along the base of the rock overhang. Several boulders (i.e., ceiling fall) contain pictographs or petroglyphs, but most of the rock imagery at 41PS191 extends along a 290 meter length of the rock overhang. Most of the imagery on the overhang is vertically oriented, but two panels of apparent celestial figures are painted on the underside of a high ledge, approximately 15 to 20 meters above the present ground surface. The imagery at this site represents at least four different styles/temporal periods, including Chihuahuan Polychrome Abstract pictographs (Archaic), Desert Abstract petroglyphs (Archaic), Big Bend Bold pictographs (Late Prehistoric/early Historic), and other Historic pictographs (post-1700). Among the figures is a shield-bearer figure, an image which is more common to the Plains or the Colorado Plateau. The rock art styles at 41PS191, as well as other

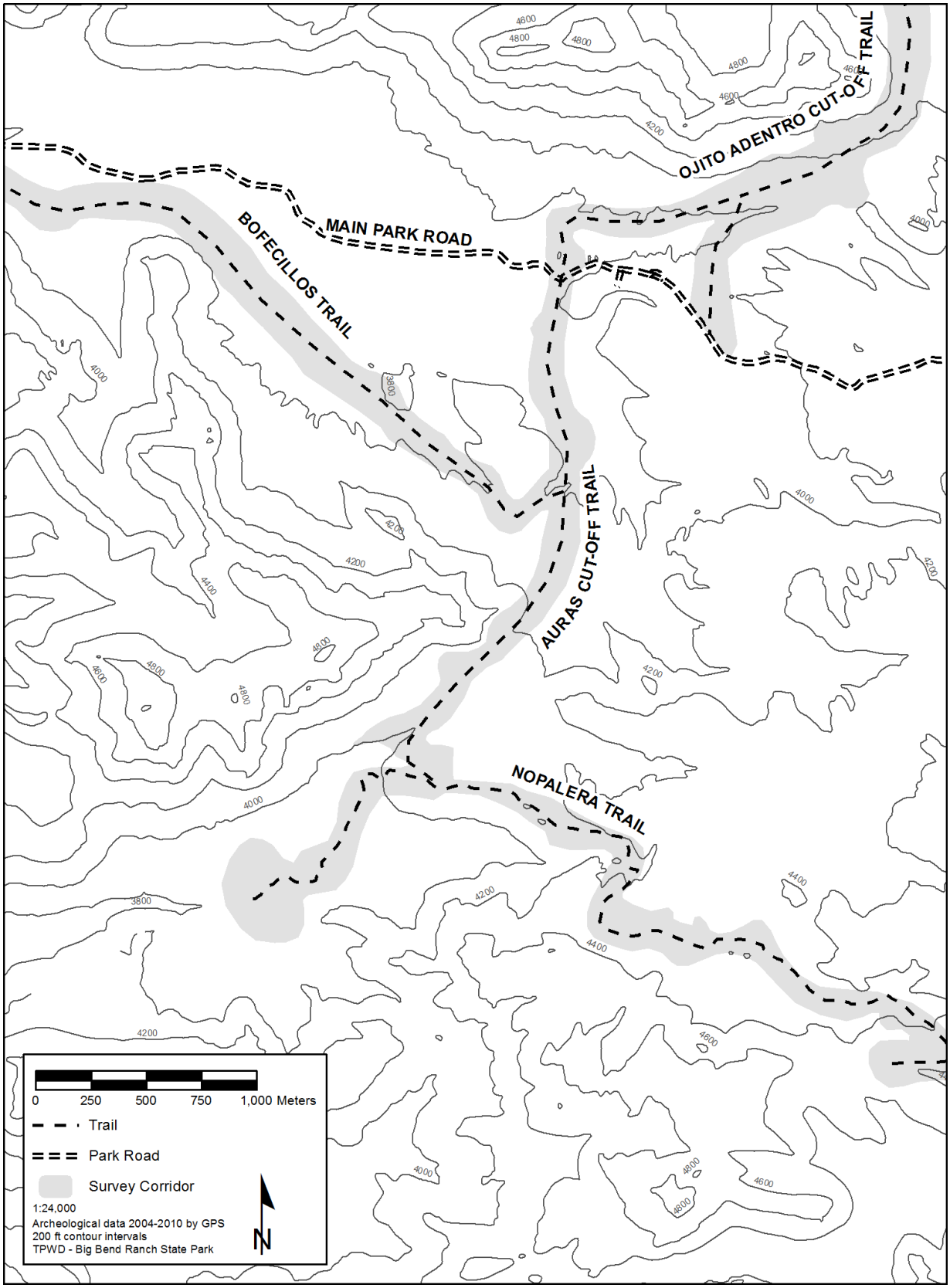


**Figure 32.** Map showing southwestern portion of project area.

rock art sites on BBRSP, are described in detail in Chapter 7 of this report.

Artifact Analysis: Artifacts observed during the 2010 investigation include an abundance of chipped stone debitage, burned rocks, manos, metates, fiber cordage, a woven sandal fragment (including woven plant material and wrapped animal fur), nine small variety corn cob fragments (*Zea mays*), a gourd fragment, a possible bow drill, red ochre, a pictograph spall, and faunal material. The sandal fragment, possible bow drill, corn cob fragments, red ochre, and gourd fragment were recovered for curation. Similar artifacts were identified at 41PS191 during previous investigations. No temporally diagnostic artifacts have been recovered from the site.

Significance: Site 41PS191 has high research value, and was designated as an official State Archeological Landmark on May 30, 1997.

Recommendations: Auras Canyon, within which site 41PS191 is located, is being considered for closure to park visitors other than by guided access. It has also been determined that no trail will be designated in the vicinity of 41PS191. Until such time that Auras Canyon is closed, this site should be monitored on a quarterly basis to assess its condition. The frequency of monitoring may be adjusted in the future, as warranted by the rate of visitation or as dictated by natural impacts.

***41PS1068***

Site Type: Site 41PS1068 is a historic ranchstead of uncertain age.

Site Area: The site measures approximately 160 meters by 60 meters, encompassing a total area of 2.36 acres (see Figure 32).

Landform: Site 41PS1068 is situated along the base of the north wall of Canyon de los Banditos. The site is further located about 4,400 feet south of Ojito Adentro.

Soil Type: Soils in the site area have been identified as Pantak and Lingua soils, 1 to 16 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1068 ranges from 3,920 to 3,960 feet AMSL.

Vegetation: Vegetation at the site is typical Chihuahuan Desert scrub, including catclaw acacia, guayacan, four-wing saltbush, and ocotillo. Surface visibility is 70 percent.

Disturbances: Site 41PS1068 has been impacted by erosion and degradation of the former rock structures (wall collapse). The site is estimated to be 70 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2008, during the archeological survey of proposed trails in the Bofecillos area of BBRSP. Recorded features consist of two stacked rock cairns (both are 1 meter in diameter by 1 meter in height), two rock corrals (23.75 and 23.5 meter in length), and an associated smaller rock-constructed pen (7 meters in length), and a three-room residential ruin constructed of rocks and mud mortar. The house, which has evidence of a porch and no window openings, measures 11.3 by 4.5 m. Few artifacts were found in association with these features. The depth of cultural deposits is unknown.

Artifacts: Artifacts identified at 41PS1068 include two unidentifiable pieces of flat ferrous metal and four Capote Plain pottery sherds dating to the Concepcion Phase. The sherds are two body sherds and two rimsherds that are rippled along the lip. All sherds were collected for curation.

Significance: Site 41PS1068 has moderate research potential and meets Criterion 1 for designation as an official State Antiquities Landmark (potential to contribute to a better understanding of the history of Texas).

Recommendations: The site should be nominated as a State Antiquities Landmark and monitored annually.

***41PS543 (Cerro Boludo)***

Site Type: Site 41PS543 is an open campsite with possible Middle Archaic, Late Archaic, and Late Prehistoric (probable Cielo complex) components, as well as Historic herding structures.

Site Area: At its widest points, site 41PS543 measures about 185 meters northwest-southeast by about 98 meters northeast-southwest, encompassing a total area of 4.5 acres.

Landform: The site covers the relatively flat top of an isolated mesa that overlooks an unnamed intermittent drainage. The drainage flows north through Cinco Tinajas and into Leyva Canyon (Figure 33).

Soil Type: The NRCS has identified soils in the vicinity of 41PS543 as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of 41PS543 is about 4,290 feet AMSL.

Vegetation: Vegetation on this site includes ocotillo, prickly pear, guayacan, lechuguilla, pitaya, Torrey yucca, and mixed grasses, providing approximately 80 percent surface visibility.

Disturbance: This site has been impacted by erosion, extensive livestock grazing, and artifact collecting.

Previous Investigations: Site 41PS543 was originally recorded in 1990 (Ing et al. 1996:212).

Present Investigation: Site 41PS543 was re-recorded in 2004, during the Rancherias Link Trail survey. The 2004 investigation resulted in the discovery of several additional features that were not included on the 1990 site map of 41PS543, including four stacked rock walls, a three-sided, stacked rock feature, and four clusters of large rocks. In addition, an artifact cull pile was noted and dispersed by the surveyors. The maximum depth of cultural deposits on this site is estimated to be no more than 20 centimeters.

Artifact Analysis: The original recorders of this site identified numerous pieces of chipped stone debitage, mostly secondary flakes, one side scraper, one possible Middle Archaic straight-stemmed dart point, one Late Archaic Ensor-like dart point, one Late Archaic Shumla dart point, one Late Prehistoric Garza-like arrow point, one Late Prehistoric Perdiz arrow point, and one Late Prehistoric Scallorn arrow point. These artifacts were produced from a variety of cherts, quartzite, and chalcedony. The diagnostic projectile points were recovered from 41PS543 during the 1990 investigation. These artifacts were located primarily in the southern one-half of the mesa top and on slopes along the west edge of the mesa. During the 2004 investigation, the proximal end of a Late Archaic Figueroa dart point and an untyped dart point fragment were recovered from the site, also in the southern one-half of the mesa top. The Figueroa dart point was produced from light brown chert, while the untyped point fragment was manufactured from a light gray, mottled chert.

Significance: This site, which is estimated to be approximately 80 percent intact, has a moderately high to high research potential and was designated as an official State Archeological Landmark on September 20, 1991.

Recommendations: Site 41PS543 should be monitored on an annual basis to assess its condition. If warranted by evidence of visitor impact, the frequency of monitoring may be increased. The site, however, is not located near

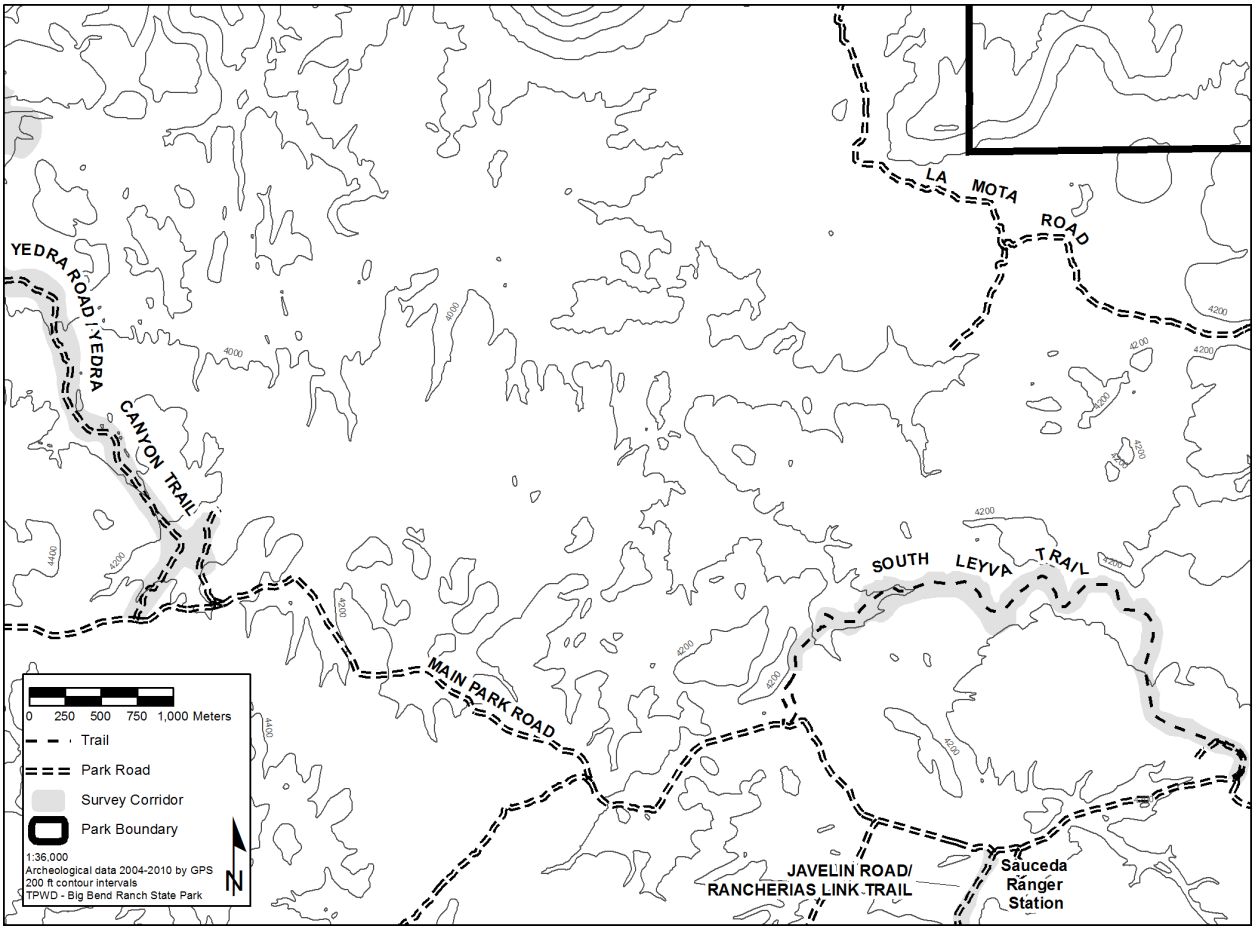


**Figure 33.** Map showing central portion of project area.

any of the presently proposed trail corridors and will not be impacted by the establishment of these trails.

***41PS1138 (Ruben's)***

Site Type: Site 41PS1138 is a rockshelter habitation with Middle Archaic and twentieth century occupations.

Site Area: The site measures approximately 30 meters by 35 meters, encompassing a total area of 0.26 acre (see Figure 33).

Landform: The rockshelter at 41PS1138 is situated above the east bank of an upland drainage. This drainage flows north into a tributary of Leyva Canyon.

Soil Type: The site is located within an area identified as Pantak and Lingua soils and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation at 41PS1138 ranges from 4,080 to 4,120 feet AMSL, with the rockshelter at 4,120 feet AMSL.

Vegetation: Vegetation at the site is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 90 to 100 percent.

Disturbances: Site 41PS1138 has been impacted by animal trampling, and possible looting. The site is estimated to be 90 percent intact.

Previous Investigation: None.

Present Investigation: This site was recorded in 2005, during the archeological survey of the Yedra Canyon and Terneros Loop Trails. Recorded features consist of two rockshelters, a talus deposit, boulder mortar, and a historic rock wall. The depth of cultural deposits is estimated to be 20 centimeters based on a trowel probe conducted in the larger of the two rockshelters.

Artifacts: Artifacts identified at 41PS1138 include a Middle Archaic Almagre dart point, bifaces, four metates, debitage, burned rocks, and tin cans. The dart point was collected for curation.

Significance: Site 41PS1138 has high research potential, and meets criteria for designation as an official State Antiquities Landmark. The site has the potential to contribute important information about the prehistory of the region (Criterion 1) and retains good integrity (Criterion 2).

Recommendations: This site is not located along any trail routes at BBRSP and is therefore unlikely to draw the attention of park visitors. Nonetheless, 41PS1138 should be nominated for designation as an official State Antiquities Landmark and monitored on an annual basis.

***41PS1139 (Almost There)***

Site Type: Site 41PS1139 is a rockshelter habitation of unknown prehistoric age.

Site Area: The site measures approximately 10 meters by 12 meters, encompassing a total area of 0.03 acre (see Figure 33).

Landform: The rockshelter at 41PS1139 is located in the southwest wall of Leyva Canyon, approximately 12 meters above the canyon floor.

Soil Type: Soils in the site area have been identified by the NRCS as Scotal-Ohtwo-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 3,760 feet AMSL.

Vegetation: Vegetation at 41PS1139 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, and catclaw acacia. Surface visibility is 70 percent outside the rockshelter and 100 percent within the shelter.

Disturbances: This site has been impacted by erosion and animal trampling, and is estimated to be 70 percent intact.

Previous Investigations: None.

Present Investigation: Site 41PS1139 was recorded in 2005, during the archeological survey of the Terneros Loop Trail. Features consist of the rockshelter with two alcoves and associated talus deposits. The depth of cultural deposits is estimated to be 15 centimeters based on the apparent depth of shallow gullies at the mouth of the shelter.

Artifacts: Artifacts observed at the site include a metate, a few pieces of chipped stone debitage, and burned rocks. No temporally diagnostic artifacts were evident.

Significance: Site 41PS1139 has moderate research potential, but does not appear to meet criteria for designation as an official State Antiquities Landmark.

Recommendations: This site is not located along any trail routes at BBRSP and is therefore unlikely to draw the attention of park visitors. No further work is recommended at this time.

***41PS572***

Site Type: Site 41PS572 is a lithic procurement site of unknown prehistoric age.

Site Area: At its widest points, site 41PS572 measures 50 meters north/northwest-south/southeast by 25 meters east/northeast-west/southwest, encompassing a total area of 0.31 acre (Figure 34).

Landform: The site is located on the northwestern flank of a butte east of Cienega Creek.

Soil Type: The site is located within an area identified as Pantak and Lingua soils, and Rock outcrop, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation for the site is 3,160 feet AMSL.

Vegetation: Vegetation at the site is typical Chihuahuan Desert scrub, including acacia, mesquite, agarita, and low grasses. Surface visibility is about 70 percent.

Disturbances: The site has moderate erosion downslope, and is estimated to be 65 percent intact.

Previous Investigations: Site 41PS572 was originally recorded in 1993 (Ing et al. 1996:208).

Present Investigations: The site was recorded in 2007, during a survey of the Panhandle Trail. The site had not changed since it was first recorded in 1993. Artifacts consist of a dense scatter of chert debitage; two source outcrops are located directly above the site.

Significance: Site 41PS572 has low research potential, and does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: Site 41PS572 is not located within any trail route, and is unlikely to attract the attention of trail users. Furthermore, site 41PS572 has now been professionally documented on at least two different occasions, and no time-diagnostic artifacts have been observed. Cultural features are limited to the chert quarry and a minimal talus deposit. No further work is recommended at this time.

***41PS574 (Sherd Knoll)***

Site Type: Site 41PS574 is an Early Archaic, Middle Archaic, and Late Prehistoric open campsite and lithic procurement site, and a Protohistoric to nineteenth century ceramic concentration.

Site Area: Site 41PS574 measures 140 meters north-south by 100 meters east-west, encompassing a total area of 3.46 acres (see Figure 34).

Landform: The site is located on the southern edge of an eroded knoll. Cienega Creek borders the western edge of the site.

Soil Type: The site is located within an area identified as Lingua very gravelly loam, 1 to 8 percent slopes (USDA 2013).

Elevation: The elevation of 41PS574 is about 3,960 feet AMSL.

Vegetation: Vegetation at this site is typical Chihuahuan desert scrub, including creosotebush, ocotillo, catclaw acacia, prickly pear, and mixed grasses, providing approximately 90 percent surface visibility.

Disturbances: This site has been impacted by erosion and animal trampling, and is approximately 60 percent intact.

Previous Investigations: Site 41PS574 was originally recorded in 1993 (Ing et al. 1996:215).

Present Investigation: Site 41PS574 was re-recorded in 2007, during the TPWD archeological survey of the Panhandle Trail. Four features were identified during the 1993 survey and relocated during the 2007 investigation. These features are a hearth, a rock alignment

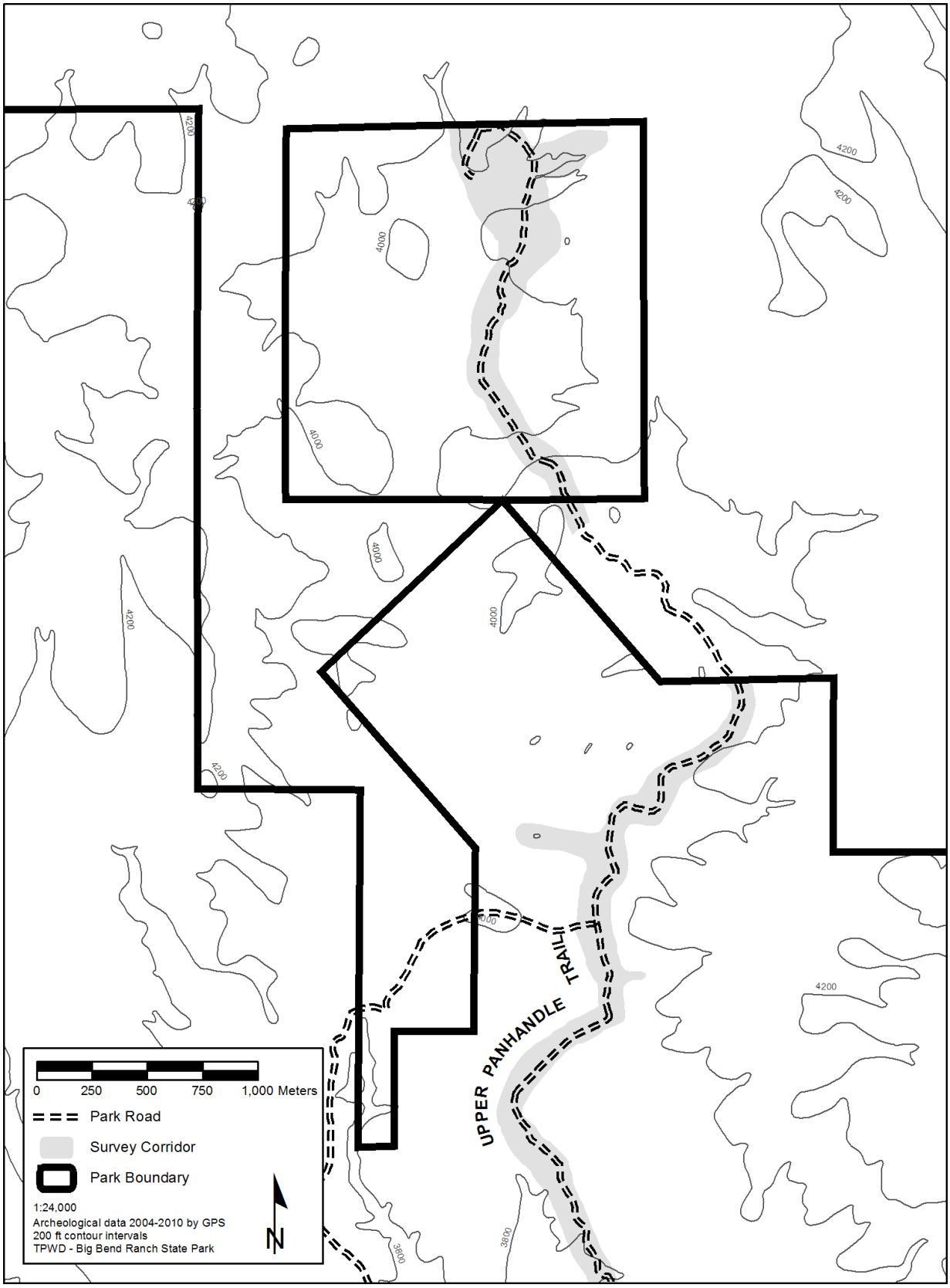


**Figure 34.** Map showing extreme northern portion of project area.

possibly representing a former structure, a small rock cairn, and a historic ceramic sherd concentration. The cairn does not appear to be prehistoric, and no definitive time period can be attributed to the rock alignment. The 2007 investigation found that the artifact assemblage, features, and general site description remain much the same as originally reported. Revised site dimension and location information were obtained during 2007. Cultural deposits at the site are surficial.

Artifacts: The 1993 investigators collected one Early Archaic Pandale dart point and 138 historic pottery sherds. The pottery sherds include glazed whiteware and majolica, though some were surmised to be Late Prehistoric ware styles. Additionally, bifaces, unifaces, cores, ground stone, burned rocks, and debitage were observed. The 2007 investigation encountered the same artifact types and recovered one Middle Archaic Almagre dart point fragment and 20 ceramic sherds, including seven Chinati Plain earthenware sherds, six Capote Plain earthenware sherds, four Conchos Plain sherds, one unidentified Type 1 brownware sherd, one Capote Red-on-brown sherd, one blue Willow transferware sherd, and one unknown green majolica sherd with fine parallel yellow stripes. The historic ceramic sherds suggest an eighteenth to nineteenth century date for the historic component at Sherd Knoll.

Significance: Site 41PS574 includes historic material from a poorly represented era in the Big Bend region, and has moderately high research potential. Site 41PS574 is recommended for designation as a State Antiquities Landmark because it meets Criteria 1 through 4.

Recommendations: This site is not located within any trail route at BBRSP, and is unlikely to attract the attention of trail users. Furthermore, the site has been professionally documented on at least two occasions, and the observed time-diagnostic artifacts removed for curation. Nonetheless, 41PS574 should be nominated for designation as an official State Antiquities Landmark, and should be monitored on an annual basis.

***41PS575 (Shepherd's Cave)***

Site Type: Site 41PS575 is a rockshelter with unknown prehistoric and historic twentieth century occupations.

Site Area: The site measures approximately 110 meters north-south by 30 meters east-west, encompassing a total area of 0.83 acre (see Figure 34).

Landform: The rockshelter at 41PS575 is located on the eastern face of a large hill, approximately 15 meters below the crest. The talus slope drops east toward Cienega Creek.

Soil Type: Soils in the vicinity of 41PS575 have been identified by the NRCS as Scotal-Oh-Two-Rock outcrop complex, 20 to 70 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 3,960 to 4,000 feet AMSL.

Vegetation: Vegetation on the talus below the rockshelter is extremely thick and includes creosotebush, ocotillo, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 40 percent on the talus and 100 percent within the shelter.

Disturbances: Site 41PS575 has been impacted by erosion, spalling, and animal burrowing. In addition, the prehistoric component of the site has been significantly impacted by the subsequent historic occupation of the larger rockshelter. The site is estimated to be 50 percent intact.

Previous Investigations: Site 41PS575 was originally recorded by Joe Sanchez, William A. Cloud, Eric Powell, and Anne Jung in 1993 (Ing et al. 1996:218).

Present Investigation: Shepherd's Cave, site 41PS575, was re-recorded in 2007, during the survey of the Panhandle Trail. The condition of the site and features appeared to be as it was when recorded in 1993. Recorded features include two rockshelters, talus deposit, and a bedrock mortar. The larger chamber contains several historic rock walls (one with a window), a bedrock mortar, and a heavily sooted ceiling. Prehistoric lithic artifacts were observed on the talus slope, possibly removed by the historic occupants of the site. The only addition to the site description was the newly recorded rockshelter 25 meters north of the main shelter. This shelter consists of a small overhang with a sooted ceiling and no associated talus or artifacts. The depth of cultural deposits on this site is estimated to be less than 10 centimeters.

Artifacts: The artifact assemblage observed in 2007 was as originally reported, including chipped stone debitage, bifaces, scrapers, cores, a metate, and burned rocks found on the talus slope, as well as tool fragments, bottle glass, historic ceramics, wood, wire nails, and leather boot fragments found on the upper talus and within the larger rockshelter. The only new artifacts found during the 2007 survey were undecorated whiteware, a fragment of a Vicks jar, and pieces of 1/16th inch hardware mesh.

Significance: Despite significant impact to the prehistoric components at 41PS575, the site retains moderate research potential. The site is recommended for designation as an official State Antiquities Landmark because it meets State Antiquities Landmark Criteria 1 through 3. Furthermore, the site merits designation under Criterion 5 because it is susceptible to vandalism.

Recommendations: This site is not located within any existing trail routes at BBRSP. Nevertheless, it is visible from the Panhandle Trail and will likely attract the attention of some trail users. The site should be monitored on a quarterly schedule or as warranted by visitation in the panhandle area of the park, for the presence of prehistoric time-diagnostic artifacts and evidence of looting. Interpretive/stewardship signage should also be considered for this site. The site should be nominated as a State Antiquities Landmark

***41PS577 (Meltdown)***

Site Type: Site 41PS577 is an Early Archaic, Middle Archaic, Late Archaic, and Late Prehistoric camp site, and a twentieth century ranchstead.

Site Area: The site measures approximately 410 meters north/northeast-south/southwest by 380 meters east-west, encompassing a total area of 39.34 acres (see Figure 34).

Landform: The site is located on the floodplain of Cienega Creek, approximately 75 meters west of the drainage.

Soil Type: Soils in the area of 41PS577 have been identified by the NRCS as 70 percent Tenneco-Bodecker complex, 0 to 3 percent slopes, flooded and 30 percent Bofecillos-Horsetrap-Rock outcrop complex, 10 to 30 percent slopes (USDA 2013).

Elevation: The elevation of the site is approximately 4,000 feet AMSL.

Vegetation: Vegetation at 41PS577 is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Thorny riparian vegetation is present near the Cienega Creek. Surface visibility is approximately 60 percent.

Disturbances: Site 41PS577 has been impacted by former ranch roads and severe erosion. The site is estimated to be 50 percent intact.

Previous Investigations: This site was originally recorded by Joe Sanchez, William A. Cloud, Eric Powell, and Anne Jung in 1993 (Ing et al. 1996:215).

Present Investigation: Site 41PS577 was re-recorded in 2007, during the archeological survey of the Panhandle Trail. Historic features identified at the site consist of four eroded stone rubble scatters, three historic structural ruins, and two historic dumps. The four stone rubble scatters have associated historic artifact scatters and may represent collapsed structures. Of the three stone structure ruins, one consists of two rooms, a fireplace with a tin flue, and remnants of mud and plaster, while a second was originally called a dugout but now appears to have been constructed on the ground surface. The two historic dumps that were observed include artifacts dating from the early twentieth century through the 1960s. A single prehistoric hearth was identified, as well. The depth of cultural deposits is estimated to be 70 centimeters based on area cutbank profiles.

Artifacts: Prehistoric artifacts observed at 41PS577 consist of six dart points, bifaces, scrapers, a graver, cores, debitage, pottery sherds, metates, and burned rocks. Historic artifacts include vessel glass (some solarized), tin cans, nails, metal implements, bed springs, barbed wire, cartridges, and ceramics. The six dart points, as well as 18 prehistoric pottery sherds, 16 historic ceramic sherds, an 1868–1940s 0.44 caliber 'Webley' rimmed center-fire cartridge casing, and an 1906–1916 aluminum E. I Graves Tooth Powder cap were recovered for curation. The dart points consist of one Early Archaic Baker/Uvalde dart point, one Middle Archaic Jora dart point fragment, one Late Archaic Paisano point, one Late Archaic Frio dart point fragment, and two untyped dart point fragments. The prehistoric pottery sherds consist of four El Paso Polychrome sherds, two possible La Junta Phase decorated brownware sherds that are a burnished reddish color with black paint, three unknown Type 1 plain brownware sherds, three unknown Type 2 plain brownware sherds, and five striated brownware sherds of unknown type. Historic sherds consist of two embossed whiteware sherds with green glaze, one porcelain sherd identified as Japanese Geishaware (produced during the last quarter of the nineteenth century until 1941) (Litts 1988:11), one probable Geishaware sherd, two undecorated whiteware sherds with Dresden Pottery maker's marks (these sherds date from about 1900 to 1905) (Debolt 1995:43), one undecorated whiteware sherd with a Knowles, Taylor & Knowles maker's mark (this sherd dates to about 1900) (Debolt 1995:72), two teal transferware sherds, two whiteware sherds with blue annular decoration and blue dots, three Galera lead-glazed sherds, one whiteware sherd with floral edge molding and hand-painted green decoration on the edge, and one earthenware sherd with green lead glaze on the interior and exterior surfaces.

Significance: The Meltdown Site, 41PS577, has moderately high research potential. The site was designated as an official State Archeological Landmark on October 26, 2008.

Recommendations: Site 41PS577 is not within any trail route at BBRSP, but the house ruin at this site is readily visible from Cienega Camp. As a result, the site may attract the attention of some park visitors. The site should be monitored at least biannually for the appearance of additional time-diagnostic artifacts and intact cultural features, as well as evidence of vandalism. Time-diagnostic artifacts observed during monitoring should be mapped, and recovered for curation.

***41PS1052 (Obsidian)***

Site Type: The Obsidian site, 41PS1052, is a lithic procurement site of unknown prehistoric age.

Site Area: The site measures approximately 200 meters north/northeast-south/southwest by 90 meters east-west, encompassing a total area of 4.44 acres (see Figure 34).

Landform: The site is located on a canyon rim approximately two kilometers southwest of Cienega Camp.

Soil Type: Site 41PS1052 is located within an area of soils identified as Bofecillos-Rock outcrop complex, 12 to 60 percent slopes (USDA 2013).

Elevation: The elevation of the site ranges from 4,120 to 4,200 feet AMSL.

Vegetation: Vegetation at 41PS1052 is sparse and includes typical Chihuahuan Desert scrub such as ocotillo, creosotebush, prickly pear, and bunch grasses. Surface visibility is 90 percent.

Disturbances: Site 41PS1052 has been impacted by erosion, and is estimated to be 90 percent intact.

Previous Investigations: TPWD staff was aware of this site prior to the present investigation, but the site had not been formally documented prior to this survey.

Present Investigation: This site was recorded in 2007. The site is well away from any trails. A few prehistoric artifacts were observed at the site. No features were observed. The area was mapped by Henry (1998) as air-fall tuff of the Morita Ranch Formation (Henry 1998). Although the outcrop in this area contains what initially appeared to be poor quality obsidian nodules, further analysis of this material revealed it to be welded tuff. Based on the presence of apparent shatter and a few possible pieces of debitage in the site area, it appears that there were attempts to quarry the welded tuff nodules from the surrounding conglomerate; however, the welded tuff nodules are highly fragmentary and largely unusable for the production of lithic tools. No subsurface deposits were present on the canyon rim.

Artifacts: A few pieces of welded tuff debitage and shatter were observed at 41PS1052.

Significance: Site 41PS1052 is an outcrop of welded tuff nodules that Native Americans may have attempted to quarry for use. The site has moderate research potential; however the site does not meet the criteria for designation as an official State Antiquities Landmark.

Recommendations: This site is not located near any trail routes on BBRSP, and is not at risk of vandalism. No further work is recommended at 41PS1052.

***41PS452***

Site Type: Site 41PS452 is an open campsite with Late Paleoindian, unspecified Archaic, Late Prehistoric, and possible Protohistoric components, and a historic twentieth century ranchstead.

Site Area: The site measures 300 meters north-south by 260 meters east-west, encompassing a total area of 19.27 acres (Figure 35).

Landform: The site is located on a low mesa extending north towards a high mountainous area. The site overlooks the north trending drainage from Botella Spring.

Soil Type: Soils in the area of 41PS452 have been identified by the NRCS as 80 percent Corazones-Ojinaga complex, 1 to 12 percent slopes and 20 percent Redford and Corazones 10 to 30 percent slopes (NCRS 2011).

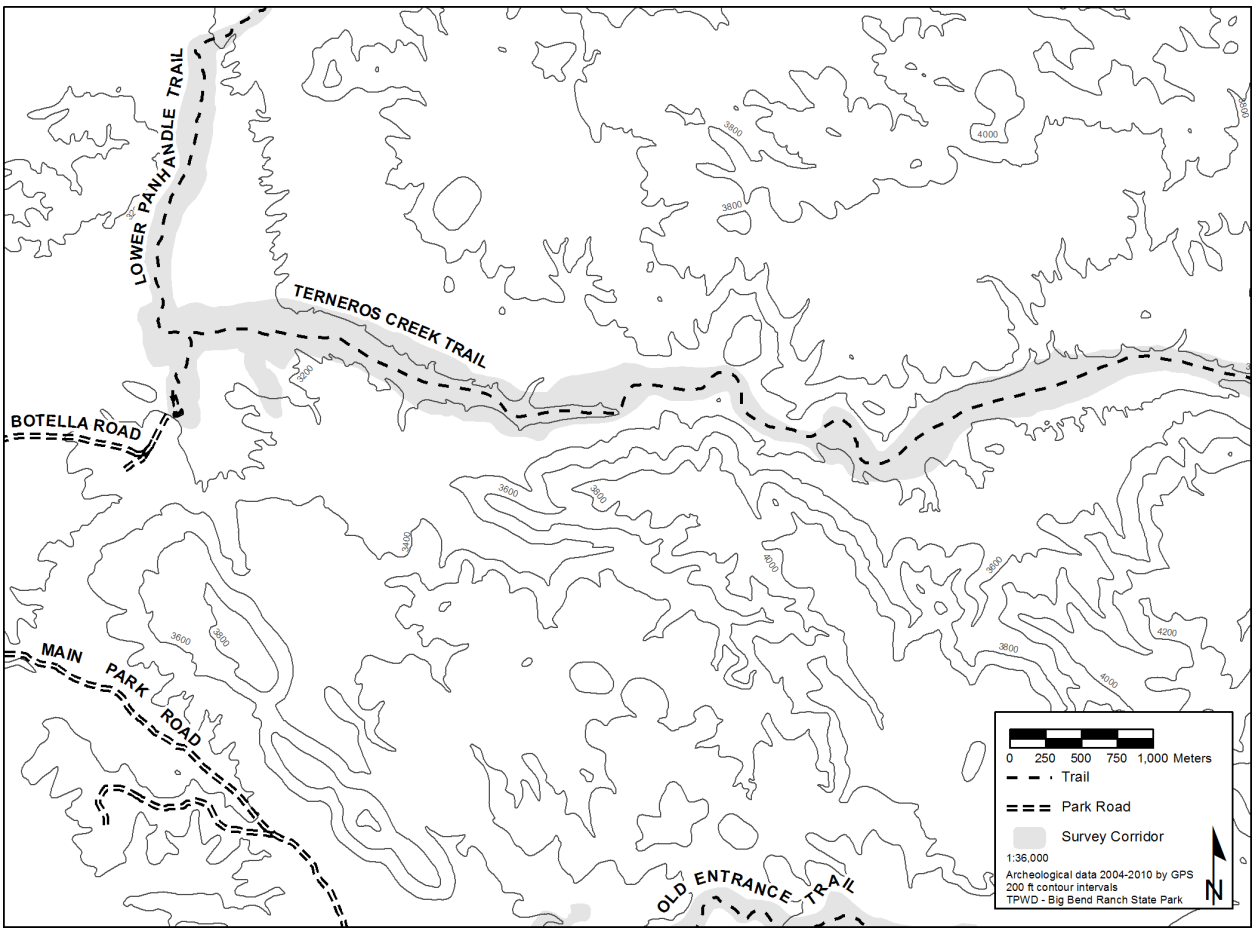


**Figure 35.** Map showing north-central portion of project area.

Elevation: The elevation of the site ranges from 3,200 to 3,240 feet AMSL.

Vegetation: Vegetation at 41PS452 is typical Chihuahuan Desert scrub, including creosotebush, catclaw acacia, prickly pear, and mixed grasses. Surface visibility is approximately 90 percent.

Disturbances: This site has been impacted by animal burrowing and trampling, erosion, and possible surface collection. The site is approximately 70 percent intact.

Previous Investigations: This site was originally recorded in 1989 by J. David Ing and Bruce Nightengale (Ing et al. 1996: 215).

Present Investigation: Site 41PS452 was re-recorded in 2005, during the surveys of the Old Entrance, Terneros Creek, and Terneros Loop Trails. Several features were recorded in 1989, including a historic building ruin, two ring middens, two burned rock pavements, several dispersed hearths, more than six burned rock scatters, a prehistoric pottery sherd concentration, and a boulder mortar. The historic ruin consisted of rock and concrete walls with a later back room addition, and a platform possibly for a generator. This is most likely a house ruin. Four additional features were identified during the present survey consisting of two ring middens and two burned rock pavements. Also, the site boundary has been extended to the west to include the pottery sherd scatter.

The site has been slightly more disturbed by erosion and trampling, but is otherwise similar to previously recorded conditions. Cultural deposits are estimated to be 25 centimeters thick based on the relief of the largest ring midden.

Artifacts: Artifacts recovered at site 41PS452 during the 2005 survey consist of a Late Paleoindian Midland dart point fragment, one untyped dart point fragment, an untyped arrow point fragment, a notched pebble (possible net sinker), and 111 Capote Plain earthenware sherds. Additional artifacts observed included other prehistoric pottery sherds, bifaces, cores, debitage, and manos. A few historic cans and cartridges were also observed.

Significance: Site 41PS452 has moderate research potential, and was designated an official State Archeological Landmark on September 20, 1991.

Recommendations: This site is not within any trail corridors at BBRSP, and is unlikely to attract the attention of trail users. Nonetheless, the site will be monitored biannually for the appearance of additional time-diagnostic artifacts, as well as evidence of vandalism. Time-diagnostic artifacts observed during monitoring should be mapped and removed from the site for curation.

***41PS1161 (Heartbreak)***

Site Type: Site 41PS1161 is an open campsite of unknown prehistoric age.

Site Area: The site measure 45 meters east-west by 40 meters north-south and encompasses 0.38 acres (see Figure 35).

Landform: Site 41PS1161 is located on the southern terrace of an unnamed tributary to Terneros Creek. The terrace is approximately four meters above the active floodplain and 250 meters south of the Terneros Creek trail.

Soil Type: Soils in the site area have been identified by the NRCS as Altar-Bodecker-Riverwash association, 0 to 7 percent slopes, flooded (USDA 2013).

Elevation: The elevation of 41PS1161 is approximately 3,400 feet AMSL.

Vegetation: Vegetation in the site area is typical Chihuahuan Desert scrub, including creosotebush, prickly pear, catclaw acacia, and bunch grasses. Surface visibility is 80 percent.

Disturbances: Site 41PS1161 has been impacted by erosion, the creation of a two-track road, and placement of a barbed wire fence across a portion of the site. However, due to the expedient nature of the present field check, the true integrity of the site remains uncertain.

Previous Investigations: None.

Present Investigation: Site 41PS1161 was recorded in 2005, during the archeological survey of the Terneros Creek Trail. Features consist of three hearths, each approximately 1 meter in diameter, and a burned rock scatter. The depth of cultural deposits is estimated to be less than 20 centimeters based on area cutbank observations.

Artifacts: Artifacts identified at this site include a metate, chipped stone debitage, scrapers, and burned rocks. No temporally diagnostic artifacts were observed.

Significance: Site 41PS1161 has high research potential and is recommended for designation as an official State Antiquities Landmark under Criterion 2 (intact deposits).

Recommendations: This site should be nominated as an official State Antiquities Landmark and monitored on an annual basis.


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