METHODS OF INVESTIGATION

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SURVEY FIELD METHODS AND DOCUMENTATION

The archeological survey conducted at Camp Stanley consisted of an extensive pedestrian survey covering approximately 991 acres of the 2,224 acres located in the Outer Cantonment (Figure 3). Previous archeological investigations at Camp Stanley were undertaken by Kibler et al. (1998), surveying acreage in both the Inner and Outer Cantonments. Although 1,076 acres remained to be surveyed in the Outer Cantonment, only 991 acres were covered due to unexploded ordnance and safety concerns in the northern part of the survey area. With the completion of the current survey, all of Camp Stanley has been subjected to archeological survey.

Prior to initiating the fieldwork, a literature search was conducted to review available reports (Boyd et al. 1990; Freeman 1994a, 1994b; Kibler et al. 1998) and maps in order to identify those areas potentially containing historic period archeological sites. Additional maps and information were obtained from personnel at Camp Stanley following commencement of the project. The Fort Sam Houston Museum also provided valuable information in the form of historic maps, aerial photographs, historic military field manuals, and military histories. All of this information assisted in the identification and interpretation of the cultural resources discovered during survey.

The current survey area consisted of the remaining acreage of Camp Stanley not covered by the previous investigations of Kibler et al. (1998). The ca. 991-acre survey in the Outer Cantonment includes sections of three large parcels known by Camp Stanley personnel as the North Pasture, the Upper East Pasture, and the Lower East Pasture. Survey of these large parcels was accomplished by further subdividing them into smaller, more manageable areas by employing artificial features such as fence lines and roads as survey area boundaries or for the orientation of transects.

A crew of five people walked transects at intervals of ca. 30–35 m across the survey area. In areas of dense vegetation, these intervals decreased to 25–30 m. Areas exhibiting good surface exposure, such as two- track roads, firebreaks, and eroded areas, were examined closely for any cultural materials or features. A limited number of off-site shovel tests were placed in areas with a high probability of containing buried cultural resources, such as stream valleys or alluvial terraces. These shovel tests were excavated in 20-cm levels and the matrix was screened through ¼-inch-mesh hardware cloth. Shovel tests ranged in size from 30–35 cm in diameter and were excavated to a maximum depth of 45 cm. Any cultural materials encountered were bagged by level and labeled with the appropriate provenience data.

The definition of a prehistoric site was based on criteria similar to those employed during previous investigations at Camp Stanley (Kibler et al. 1998). When prehistoric cultural materials were encountered, the surrounding area was examined closely for any additional materials. If three or more artifacts were situated within a 25-m-diameter area, the locality was recorded as a site. When less than three artifacts were encountered in a 25-m-diameter area, it was not recorded as a site unless other cultural materials (e.g., burned rocks, faunal remains) or cultural features were found in the immediate vicinity and additional artifacts were discovered within a reasonable proximity of the original finds. Historic sites consisted of those areas having historic artifact scatters and/or historic features (e.g., foundations, construction footings, military training trenches, etc.). Because of extensive use of the base by the military, light scatters of modern and possible historic debris in the form of wire nails, plain whiteware, broken glass, miscellaneous metal fragments, and various military debris (e.g., spent cartridges, shrapnel, barbed wire, etc.) were observed across the survey areas. Although it is likely that most of these materials predate World War II, their disturbed and irregular nature makes it unreasonable to consider these isolates as sites. More-tangible archeological data pertaining to the military presence are found in the remains of the features constructed by the military to

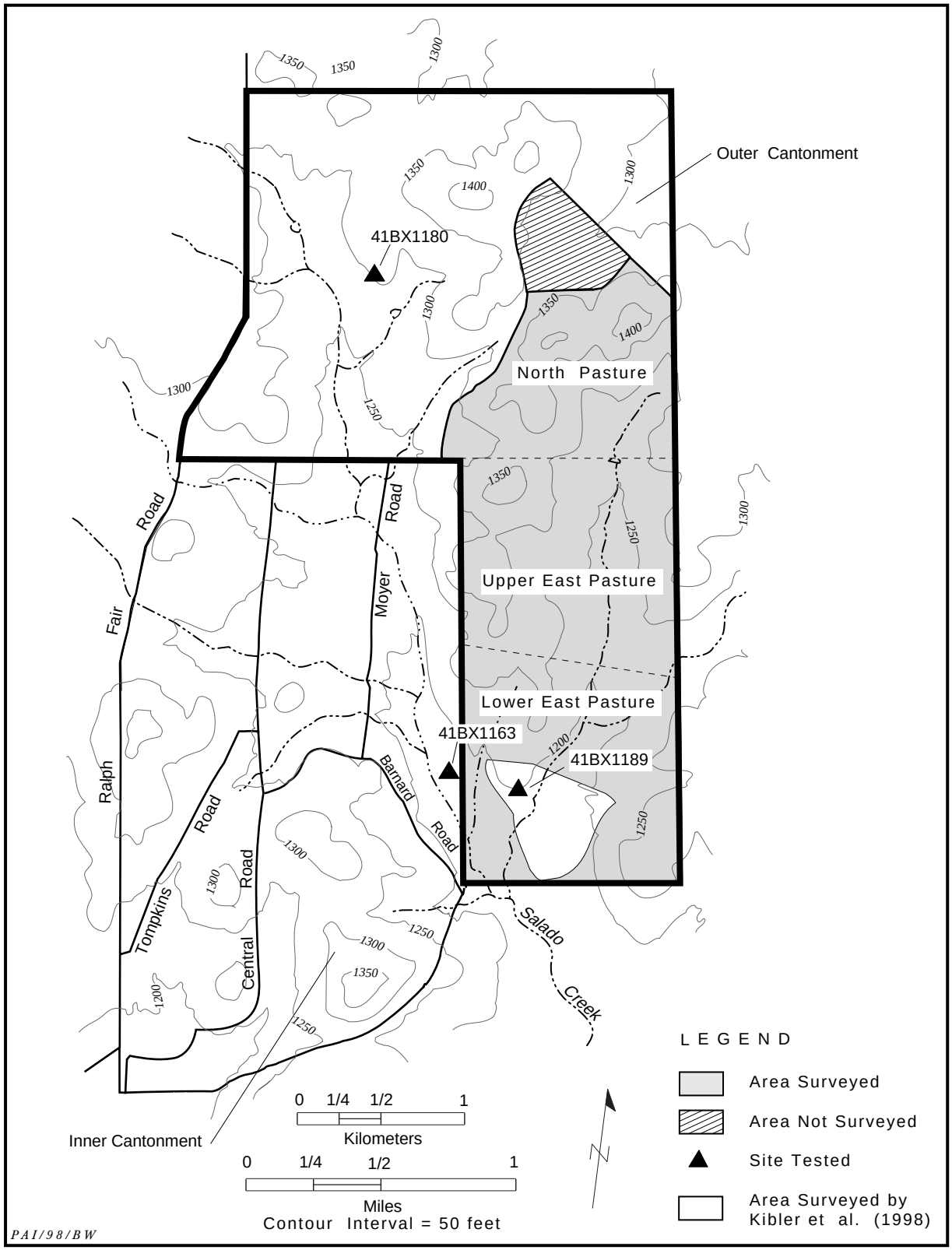

Figure 3. Map of Camp Stanley, showing areas surveyed and sites 41BX1169, 41BX1180, and 41BX1189.

house and train its troops. Archeological sites were initially marked with flagging tape and their positions were marked on a topographic map. Formal documentation of the sites was conducted after survey of the parcels was completed.

Recording of archeological sites included a surface reconnaissance of the site area to identify and document the presence of cultural materials and to locate any potential features. Archeological sites were documented through the use of State of Texas Site Data forms, site sketch maps, black-and-white prints, color slides, and various site notes. Only diagnostic artifacts (if present) were collected for proper identification in the laboratory. No shovel tests were excavated on the single prehistoric site due to a lack of appreciable amounts of sediment (>10 cm in depth). Additional documentation generated as a result of the survey included daily journal logs maintained by the Project Archeologist, photo logs, and field maps (e.g., photocopies of topographic maps showing site localities, areas surveyed, etc.).

ARCHEOLOGICAL TESTING

Excavation and Documentation

The second part of the current investigations at Camp Stanley involved the National Register testing of sites 41BX1180, 41BX1163, and 41BX1189 (see Figure 3). This included the excavation of 1-x-1-m test units, shovel tests, and backhoe trenches as well as site mapping with a total station. Testing at 41BX1180, a prehistoric open campsite with a burned rock midden, involved re-locating the site, examining the area for surface artifacts and features, shovel testing, establishing a baseline and grid, and test unit excavations. Shovel tests were utilized at 41BX1180 to assist in determining site boundaries and to discover any buried cultural materials associated with the site. Shovel testing was conducted on a grid system working off the site's baseline at 10-, 20-, and 30-m intervals. Shovel tests were excavated in arbitrary 20-cm levels to limestone bedrock. The shovel tests averaged 30–35 cm in diameter. Matrix was passed through ¼-inch-mesh hardware cloth, and cultural materials were bagged by level and labeled with the appropriate provenience data. All shovel test locations were recorded on the site map.

After the grid was established, a 10-m² block of units was laid out over a quadrant of the burned rock midden. Field test unit designation was based on the north and east coordinates of the southwest corner of the test unit within the site's grid. Test units were excavated in arbitrary 10-cm levels. Vertical control was maintained by a water level set next to the excavation block. The water level was tied into the vertical datum, a nail placed at the base of a nearby live oak tree and arbitrarily designated 100.00 m. Isolated test units at 41BX1180 were excavated in arbitrary 10-cm levels numbered sequentially starting with Level 1 at the ground surface. Vertical control was kept by a line-level datum located at the corner of the test unit with the highest surface elevation. Elevations were later obtained through total station readings. Excavated matrix from each level was screened through ¼-inch-mesh hardware cloth. Cultural materials recovered from the screen were bagged by level and labeled with appropriate provenience data. The documentation of each level was achieved with the completion of an excavation level form, which noted features, artifacts, inclusions, and the nature of the matrix. All thermally altered rocks recovered from each level were counted (except for the <5 cm class), weighed, and size graded (<5 cm, 5–15 cm, >15–25 cm, >25–35 cm, and >35 cm) and then recorded on burned rock data forms. Upon completion of the final level, test unit walls were profiled and recorded. Features encountered during excavations were described on feature data forms, photographed, drawn in plan view, cross sectioned, and drawn in profile. Flotation samples were collected from select levels of the burned rock midden and smaller features. These samples were floated to recover any wood charcoal and/or charred seeds. Sediment samples were collected from the burned rock midden and proveniences outside of the midden. These samples were subjected to grain-size analysis by hydrometer and percentages of organic matter, carbonates, and total phosphorus (ppm) were calculated.

Backhoe trenches were excavated at both 41BX1163 and 41BX1189 to cross-section World War I–era trench features and to determine the depth of the cultural deposits. These trenches were placed at the discretion of and monitored by the Project Archeologist. After completion of the excavations, backhoe trench walls were cleaned and selected walls were drawn in profile, recording the depths of the World War I features, related stratigraphy (including Munsell colors and textures), and location of any cultural materials, if present. All of the backhoe trenches were documented with black-and-white prints and color slides. Test units were placed at the discretion of the Project Archeologist and excavated in the same manner as the isolated units at 41BX1180.

A topographic map of each site showing surface topography and the locations of the test excavations was produced with the total station. All three sites received a permanent datum marker—a stamped

aluminum cap set in concrete—which also served as a mapping station.

Artifact Analysis

Chipped Stones

The analysis of the chipped stone artifacts recovered from 41BX1180 utilized a technological and functional framework comprised of five classes of tools and artifacts: projectile points, bifaces, unifaces, edge-modified debitage, and unmodified debitage. All artifacts from all proveniences were analyzed.

Projectile points were divided into arrow points, arrow point preforms, dart points, and dart point preforms. All typological identifications were made by Elton R. Prewitt with reference to the type descriptions of Kelly (1983), Suhm and Jelks (1962), and Turner and Hester (1993). Tool completeness was recorded for each specimen. Tool completeness can be categorized as intact or nearly complete, proximal, stem, medial, distal, longitudinal, barb, wedge, or indeterminate edge fragments. Maximum length, maximum blade width, maximum thickness, base width, haft length, and neck width were measured when applicable.

Bifaces were categorized by their stage of reduction (early, middle, late, finished, or indeterminate), and tool completeness was recorded for each specimen. Stages of reduction are defined by the following attributes. Early stage reduction bifaces exhibit the nature of the raw material blank from which they were made (e.g., cortex, stream cobble, or tabular chert morphologies). The biface is in an initial stage of percussion shaping, exhibiting large, deep percussion flake scars, irregular cross sections, and irregular margins. Percussion thinning is not evident. Middle stage reduction bifaces show evidence of initial percussion thinning. The percussion flake scars are more evenly spaced and tend to run almost all the way across the biface. Margin regularizing is accomplished with fine percussion flaking, and platform preparation is more distinct and carefully undertaken. Late stage reduction bifaces have apparent final percussion thinning and margin regularizing. The percussion flake scars are well spaced. They overlap only slightly with contiguous flake removals, and they tend to terminate at the medial ridge of the biface, often with steep or hinge fractures, which are met by similar flaking from the opposite edge. Evidence of very careful platform preparation is present, with many of the platforms having been isolated, possibly by pressure flaking. A finished stage biface exhibits very careful, selective pressure flaking along the margins. The high ridges between the percussion flakes have been removed, producing a very sharp and regular margin. The tool is carefully pressure thinned across both faces and use wear is evident.

Unifaces were categorized by type, such as end scraper, side scraper, end/side scraper, knife, graver, spokeshave, or indeterminate uniface, and by tool completeness. The presence or absence of cortex also was noted. When complete, maximum length, width, and thickness were recorded.

Flakes with consistent unifacial and/or bifacial microflake scars, as opposed to items with intentional retouch or postdepositional alterations, were classified as edge-modified flakes. Edge-modified debitage attributes include flake type, dorsal cortex percentage, maximum dimensions, and number of modified edges. Flake types include complete flakes, which have striking platforms and hinged or feathered terminations; proximal fragments, which have striking platforms but lack hinged or feathered terminations; chips, consisting of only medial or distal fragments without striking platforms; and chunks, angular debris that lack any flake attributes altogether.

The unmodified debitage was sorted, based on flake type, into complete flakes, proximal fragments, chips, and chunks. The percentage of cortex present and maximum dimension also were recorded.

Other Materials

Other materials recovered from 41BX1180 include burned rocks, wood charcoal, charred seeds/nuts, and ground stone tools. Historic artifacts recovered from sites 41BX1163 and 41BX1189 are very limited in number. Analyses, other than simple quantitative analyses and identification, were not performed on these materials.