HISTORIC STRUCTURES REPORT

BATES WELL RANCH
ORGAN PIPE CACTUS NATIONAL MONUMENT

A Service Learning Project of the
Preservation Studies Program
College of Architecture and Landscape Architecture
The University of Arizona

In conjunction with:
Desert Southwest / Cooperative Ecosystem Studies Unit (DS/CESU)

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Project Team

This Historic Structures Report (HSR) was carried out between the National Park Service (NPS) and the University of Arizona (UA) through the Desert Southwest Cooperative Ecosystem Study Unit (DS/CESU) and Joint Ventures Agreement. The Report was compiled as part of the requirements in ARC/LAR 4/597j, Documentation and Interpretation of the Historic Built Environment, a Preservation Studies service-learning class in the College of Architecture and Landscape Architecture at the University of Arizona and completed under the supervision of the principal investigator.

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MANAGEMENT SUMMARY

Executive Summary

The purpose of this report is to provide architectural documentation and preservation treatment recommendations for the Bates Well Ranch, Organ Pipe Cactus National Monument (ORPI) as part of a comprehensive Historic Structures Report (HSR) following the National Park Service standards as set forth in Chapter 8 of DO-28, Cultural Resource Management Guideline.

The Bates Well Ranch is located in a scenic, arid valley in the northwestern quadrant of Organ Pipe Cactus National Monument. The site exhibits buildings and structures that are characteristic of the cattle-raising pattern that developed and expanded in the international-border area that is now Organ Pipe Cactus National Monument during the early and middle decades of the twentieth century. The significance of this site is associated with the desert ranching legacy of the Gray Partnership who strongly influenced the cultural landscape of what became the Organ Pipe Cactus National Monument with fifteen sites devoted to cattle-raising. The Bates Well Ranch district is listed on the National Register of Places (1994; NR#94000493) with 12 buildings and structures as contributing a whose period of significance is between 1913 and 1942, representing the beginning of the site as a cattle ranching hub with the arrival of Reuben Daniels to the build-out date of its current configuration marked by the moving of the main ranch house to Bates Well.

Although the site's period of significance is focused on the early to middle decades of the twentieth century, its ranching significance is preceded by other themes of significance. These earlier themes of significance include prehistoric transportation (its location on the prehistoric shell trail between the Gulf of California and the communities of, and beyond, the Santa Cruz, San Pedro, and Salt River valleys), mining (the arrastra on site represents the existence of mining activity on the site prior to its use as a ranch) and most fundamentally, water (with nearby springs providing the reason for prehistoric crossroads and settlements as well as the historic O'odham village of Juni Kahch). Based on an assessment of other cultural sub-areas of the Monument, the Bates Well Ranch site offers an optimal concentrated setting for the comprehensive interpretation of these multiple themes of significance.

The scope of this report includes the twelve contributing buildings and structures recognized by the National Register nomination in addition to three well sites, which are listed as follows: the Main Ranch House, Bunkhouse No. 1, Tack House, Hay Barn/Bunkhouse No. 2, Blacksmith's Shop, Ocotillo Shed, Small Residence, Well/Windmill 1, Well/Windmill 2, Eastern Corral, Southern Corral, Arrastra, plus the site of the original Bates Well and a 1953 windmill that were considered non-contributing elements in the National Register nomination.

The overall condition of the ranch complex, including its landscape, buildings, structures, and features, is fair due to a lack of regular maintenance and the natural weathering and deterioration of building materials in extreme climates such as exists at the Bates Well Ranch. The site's remoteness from other Monument facilities, including the Kris Eggle Visitor Center, contributes to the difficulty in the management of its resources. In addition, the Border Patrol currently maintains a camp directly adjacent to the Main Ranch House that, on one hand, acts as a deterrent for unauthorized use of, and vandalism of, the site by the increasing number of

undocumented aliens crossing through the Monument, but on the other hand, compromises the interpretative experience of the site due to the visual and aural intrusion of the camp.

This report makes the following recommendations:

1. Amend the National Register nomination to include a more comprehensive ranching context, and incorporate additional themes of significance representing a broader interpretation of the historical use of the site, including water, transportation, and mining.

2. Develop and implement a phased interpretation plan that creates a). off-site exhibits at the Visitor Center that includes multiple themes of significance, b). on-site signage for overall ranching context and at each building/structure, and c). interactive on-site exhibits with building accessibility.

3. Implement a phased treatment plan that identifies two tiers of the physical complex including a Tier One core ranch and landscape physical context (Main Ranch House, East Corral, Windmill No. 2, Arrastra, Ocotillo Shed, Bates Well), and a Tier Two ranch and landscape physical context around the core Tier One complex (Windmills Nos.1 & 3, Small House, Blacksmith Shop, Tack House, Bunkhouse, Haybarn, Southern Corral) that focuses on the restoration of the character defining features of the landscape, buildings and structures. This recognizes that the specific recommended treatments must be done in conjunction with the Monument's enhancement of the comprehensive interpretation plan regarding its cultural resources. These ultimate treatment recommendations should be implemented in coordination with the site's ultimate use defined in a phased plan below.

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This report also presents the following scenarios to guide the Monument in defining the site's appropriate ultimate use and the phasing of interpretive and preservation treatment recommendations outlined in this report. These scenarios are intended to be implemented cumulatively and in sequential order:

1. No Action
   - No treatment of buildings or site features; buildings and site features would be allowed to deteriorate.
   - Border Patrol presence continues as a deterrent to unauthorized use of buildings and decline of site integrity, but also compromises integrity of interpretive experience of the site.

2. Off-Site Interpretation / No On-SiteTreatment
   - Amend the National Register nomination to include other themes of significance for the site and larger sub-area of the Monument.
   - Interpretation efforts to be concentrated off-site at Visitor Center.
   - Even though Border Patrol presence is a major deterrent to visitation, site access should be encouraged with appropriate notification of liability regarding security and accessibility, as well as the role of the Border Patrol at the site.
   - No treatment of buildings or site features; buildings and site features would be allowed to deteriorate.

3. Minimal On-Site Interpretation
    - No building treatments
    - On-site interpretive signage for overall ranch context and at each structure.
    - Move Border Patrol camp away from immediate adjacency to Ranch site.
    - Venue for "event" visitation (horseback & jeep tours, storytelling, etc.)

4. Implement Recommended Treatments for Tier I Structures
    - Defined as the core ranch and landscape physical context (Main Ranch House, East Corral, Windmill 2 (Historic Bates Well), Arrastra and adjacent landscape) representing association with multiple ranch function/use types, building materials and site features, as well as opportunity to introduce multiple themes of significance (water, mining, ranching).
    - Requires Border Patrol presence and potential for unauthorized use of the site to be reduced.

5. Implement Recommended Treatments for Tier II Structures
    - Representing a larger sphere of physical complex and landscape around core Tier I structures (Windmills #1 & #3, Bates Well (non-historic), Small House, Blacksmith Shop, Tack House, Bunkhouse, Hay Barn, Southern Corral and adjacent landscape)
    - Rehabilitate Main Ranch House to provide indoor interpretive exhibit of ranch life.

Administrative Data

Location Data

As this Historic Structures Report includes a district of 14 buildings, structures and features, locational data for each is included in the Physical Description section of this report.

Proposed Treatments

Preservation of the site's character defining features, especially configuration of the ranch complex of buildings, structures, and features and the landscape elements, including roads and the native vegetation, whose relationship to the built features are equally critical to the ranching theme of significance. *Preservation* in also the recommended treatment for 2 of the structures associated with wells on site. Refer to *Part Two: Treatment and Use* for specific treatment recommendations.

Restoration of the character defining features of 11 of the buildings, structures, and features whose individual character defining features and preservation treatments are specified in the *Physical Description and Treatment and Use sections*, respectively, of this report.

Rehabilitation of the Main Ranch House to comply with current building, life safety, and accessibility codes and to provide indoor interpretive exhibit of ranch life.

Related Studies

Historic Resource Study: Organ Pipe Cactus National Monument, Arizona. Denver: National Park Service, Denver Service Center, 1977.

Bates Well Ranch National Register of Historic Places Nomination, 1994.

Bates Well Documentation, Organ Pipe Cactus National Monument, Scott Travis, Kevin Harper.

Cultural Resource Data

National Register of Historic Places, designated 1994.

Period of Significance

The period of significance is between 1913 and 1942 as defined by the National Register nomination, representing the beginning of the use of the site as a cattle ranching hub by Rube Daniels to the build-out date of its current configuration marked by the moving of the main ranch house to Bates Well. This report recommends expanding the period of significance to reflect earlier themes of significance.

Part One: DEVELOPMENTAL HISTORY

Introduction

Organ Pipe Cactus National Monument celebrates the wildlife and plants that have mastered survival in the extreme temperatures and little rainfall that characterize the Sonoran Desert.

— Organ Pipe Cactus National Monument Mission Statement

The purpose of the Bates Well Ranch Historic Structure Report is to evaluate the existing conditions of the district of 14 buildings, structures and features and make recommendations to guide the future maintenance, preservation, and rehabilitation efforts necessary to utilize the district for future use. The Historic Structure Report establishes a baseline of information, both archival and field documentation, from which future actions can be taken.

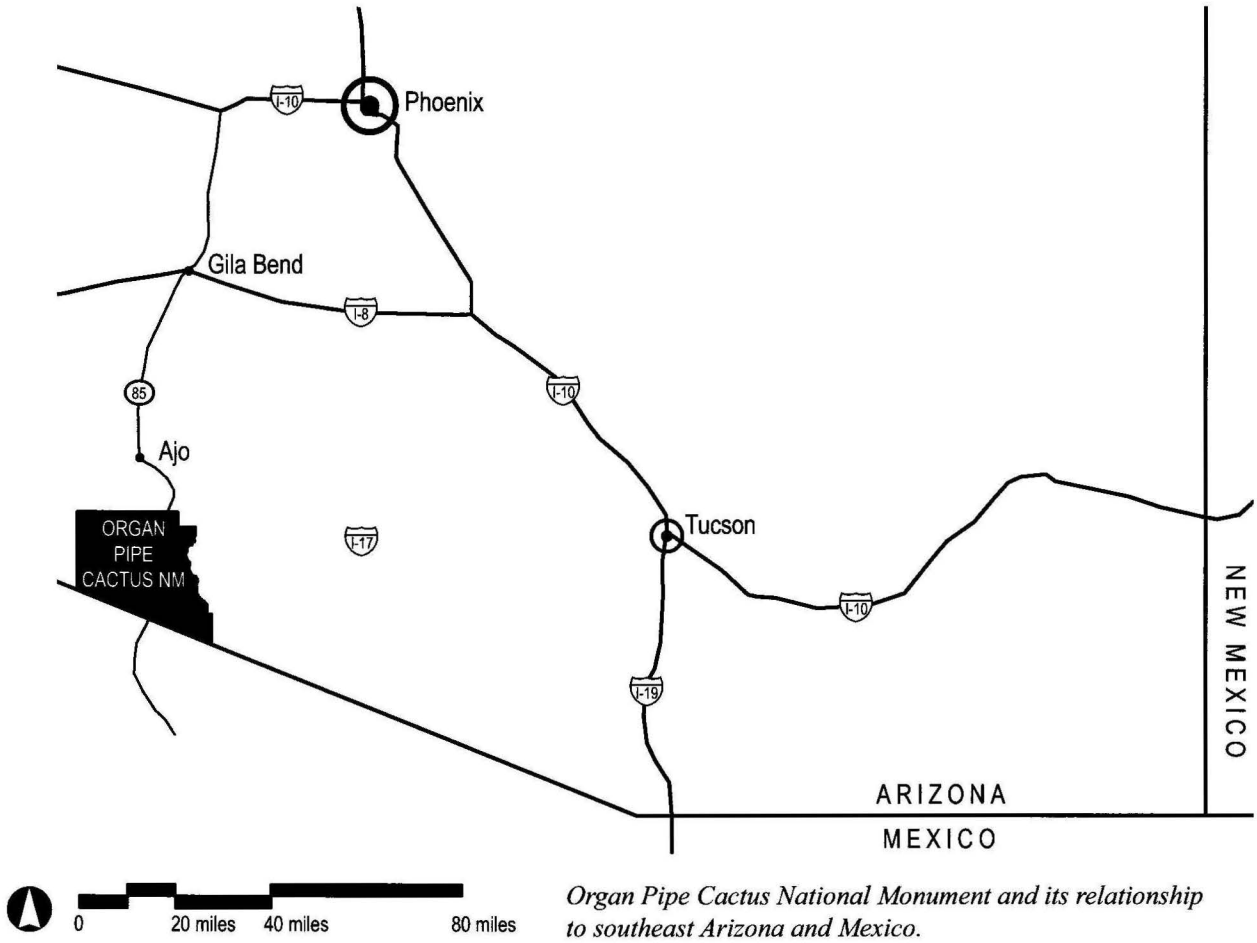
The scope of the Historic Structure Report (HSR) was restricted to evaluating the architectural integrity of the site, i.e. the specific historic features that characterize the site's significance as documented by the National Register of Historic Places nomination form. This report provides condition assessment, recommended preservation treatments and action priority for holistic building systems, as well as individual features of building exteriors and interiors, as they pertain to preserving the site's historic and architectural integrity. Where appropriate, this report does make recommendations for further professional evaluation when the expertise required to assess life safety and code compliance is beyond that of the project team.

This Historic Structure Report is based on established methods for the evaluation and assessment of historic buildings as codified in the National Park Service's Cultural Resource Management Guideline (Available online, http://www.cr.nps.gov/history/online_books/nps28/28contents.htm). Historic Structures Reports are presented in Chapter 8. It provides a systematic inventory of all the building systems, features, materials and spaces according to significance, condition and priority to objectively determine the appropriate preservation treatment.

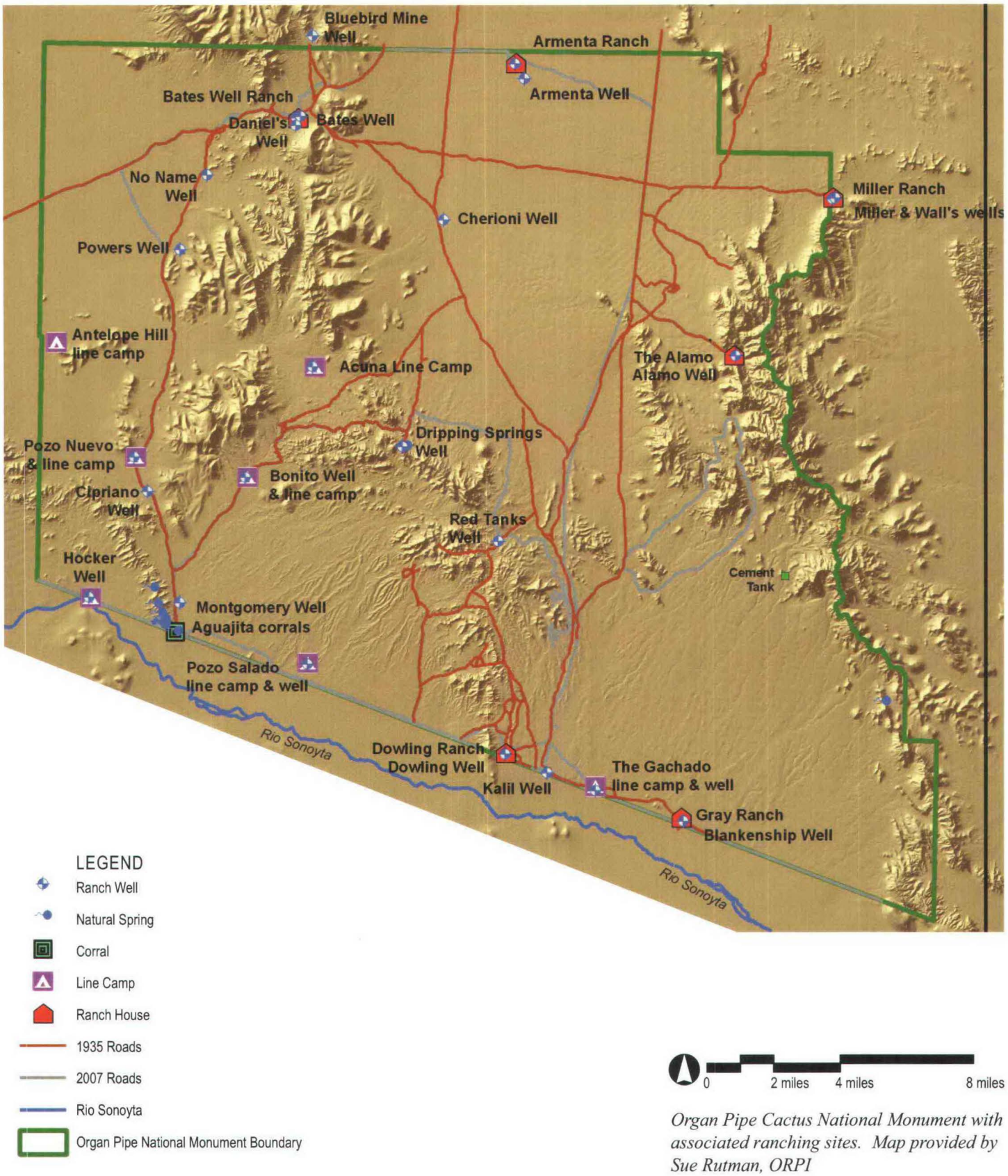
Significance is defined as a feature's association with the historical themes often articulated in the National Register of Historic Places nomination. Significance is exemplified in the character defining features and evaluated as High, Medium, or Low based on the theme's relationship to the original construction, a defined period of significance, or subsequent to the period of significance.

Condition is defined with an eye for threats to the resource, modifications, and character-defining attributes and evaluated as Good, Fair or Poor. Good is assessed when the feature is intact, structurally sound and performing its intended purpose; the feature needs no repair and only minor or routine maintenance. Fair is assessed when there are signs of wear, failure or deterioration, although the feature is generally structurally sound and performing its intended purpose. Poor is assessed when the feature is no longer performing its intended purpose, the feature is missing or there is severe deterioration or failure; the feature requires major repair or replacement.

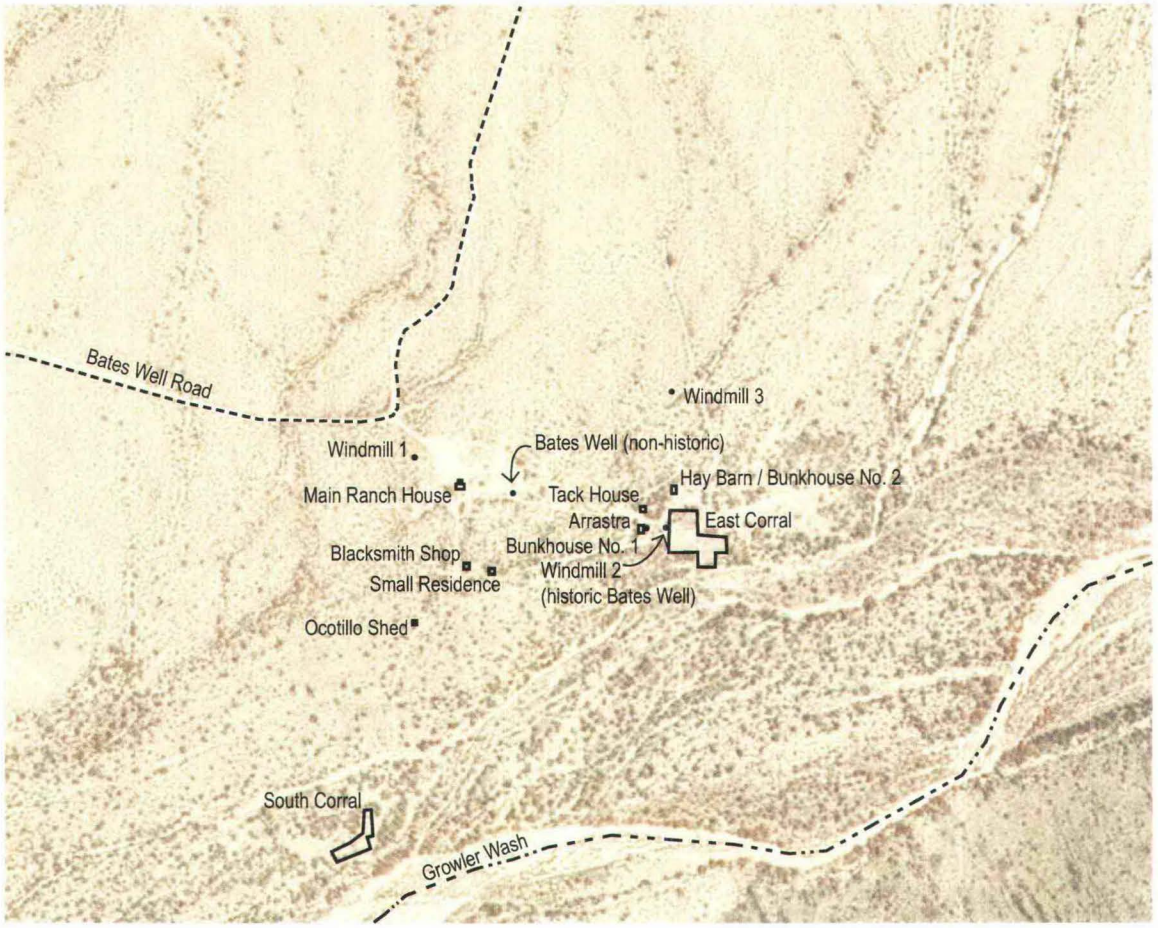
Priority is defined as the urgency for repair or other preservation treatments and is evaluated as Critical, Serious or Minor based on a). the amount of time likely before that feature will fail; b). the present danger to life safety; and c). conformance with current requirements of regulatory agencies and codes. Critical priority is when a feature requires immediate attention (within two years) based on threats to structural integrity or conformance with life safety code requirements regardless of future use. Serious priority is when a feature requires preservation treatment within five years to maintain architectural integrity based on the building's character-defined features. Minor priority is when a feature requires preservation treatment with a long-term impact (beyond five years), for any future use in conformance with code requirements and programmatic needs.



Organ Pipe Cactus National Monument and its relationship to southeast Arizona and Mexico.



Organ Pipe Cactus National Monument with associated ranching sites. Map provided by Sue Rutman, ORPI



Buildings and structures at the Bates Well Ranch site included in this report

Historical Background And Context

The Bates Well Ranch district is located in a scenic, arid valley in the northwestern quadrant of Organ Pipe Cactus National Monument, situated in southwestern Arizona along the international border with Mexico. It is situated in an alluvial flat bordered by low rocky hills about 2 miles directly south of the northern boundary and about 8 miles directly east of the western boundary of the monument. The property is adjacent to Growler Wash at the mouth of Growler Canyon. It is about 16 miles from the property northeast to the town of Ajo via the bumpy, one-lane, dirt-and-gravel Bates Well Road that connects at the monument's boundary with the graded dirt Darby Well Road. The site of Growler Mine (on the National Register of Historic Places as the Growler Mine Area) is about 1 mile to the west of the Bates Well Ranch. (excerpt from Van Horn 1994: 4)

The ranch district is located within the Low Basin and Range subdivision of the Basin and Range Physiographic Province of southwestern Arizona, an area characterized by long, narrow, north-northeast trending mountain ranges separated by broad alluvial valleys and basins. The ranch area is located west of the Valley of the Ajo at an elevation of approximately 1400 feet above mean sea level. Adjacent mountain ranges include the Bates, Growler, and John the Baptist Mountains, composed of mid-Miocene to Oligocene silic to mafic flows and pyroclastic rocks (Reynolds, Map 26). Several large west and northwest flowing seasonal drainages, including the Growler and Cherioni Washes, cross the area, and eventually join the Gila River to the north.

The remote setting remains much the same as it was when cattle were being run there during the ranch site's designated period of significance, 1913-1942. However, humans have occupied the Bates Well area for thousands of years and can be associated with the following themes of significance.

Water Utilization in the Bates Well Region

A common theme throughout this period of utilization has been the availability of water. As one of the most arid regions in North America, it is a difficult place for people to inhabit on a permanent basis given the relative lack of perennial water sources and extreme heat. The obvious rationale which explains such a long period of occupation in this region is water. The Bates Well area was likely one of the few places that water would have been available on a reliable basis, either from seasonal flows or from tinajas (basins or depressions that are worn into bedrock that collect rainwater). Five tinajas have been identified within a three mile diameter radius of Bates Well and would have held water primarily on a seasonal basis after summer monsoon events. However, there is also evidence of prehistoric use of groundwater in the form of a resevoir excavated in the nearby Valley of the Ajo (Rankin [Draft Report] 1995:17). Surface water flow in Growler Wash is probably limited to the monsoon storm events, but the water table is also closer to the surface than in most areas of the Monument due to the confining nature of the nearby mountains and associated subsurface volcanic dikes; these geologic structures would have forced groundwater closer to the surface and thus made it easier to access. Water thus becomes the reason for prehistoric habitation of this area and the location of the Bates Well Ranch, in the immediate vicinity of these resources. During the late 19th and early to mid-20th centuries, Bates Well served as one of only a few water sources for the Growler Valley rangeland and its associated human settlements and activities. (Brown and Hoy 1967:32).

Prehistoric Settlements and Transportation Systems in the Bates Well Region

Bates Well has been a site of human habitation in the Sonoran Desert from prehistoric times until the present period. It served as a crossroads and camping spot for seasonal routes of aboriginal migration and trade in prehistoric Hohokam and historic Tohono O'odham and Hia-Ced O'odham times (formerly Papago and Sand Papago peoples, respectively). It, for example, was a stopping place for the O'odham on their annual pilgrimages south to gather salt by the Gulf of California. It continued as a crossroads during the Anglo period of settlement and was the site of the nineteenth and twentieth century Hia-Ced O'odham village of Juni Kahch (variously spelled as Juni Kaack, Tjuni Kaatk, Tjunikaat, or T junikaatk). It means "where there is saguaro fruit or place of saguaro fruit." The tradition of gathering fruits from the organ pipe and saguaro cacti by the O'odham is long-standing and continues to be done today (McDougall, 1940). During a 1909-1910 trip, the explorer Carl Lumholtz, visited Bates Wells observing that, "some of the former sand people (Hia-Ced O'odham) live here. At present this is a mine and store, a few Americans residing. Good well" (Lumholtz p. 378). (excerpt from Van Horn 1994: 17)

The Bates Well Ranch district is located in the western Papagueria, a historically dynamic culture area in southwestern and south-central Arizona and northwestern Sonora. Human occupation in the western Papagueria is represented by five distinct cultural periods: the Paleoindian (9-10,000 B.C. to 6-8000 B.C.), Archaic (6-8000 B.C. - A.D. 300), Prehistoric Ceramic (A.D. 300 - 1450), Protohistoric (A.D.1450-1700), and Historic periods. While several cultural overviews of the Papagueria and the western deserts of Arizona have been written (Doelle 1980; McGuire and Schiffer 1982; Rozen 1979; Stone 1986, 1991; Whittlesey et. al. 1994), a more area-specific synopsis is presented by Rankin ([Draft Report] 1995).

A review of the AZSITE cultural resource database, General Land Office plats of T14S, R6W; T14S, R7W; T15S, R6W and T15S, R7W, available from the U.S. Bureau of Land Management, Rankin's ([Draft Report] 1995), as well as on-line resources at the Arizona State Parks (Historic Trails of Arizona) and the U.S. Fish and Wildlife Service websites (http://www.pr.state.az.us/partnerships/trails/diablo.html and http://www.fws.gov/southwest/refuges/arizona/diablo.html, respectively) indicated the presence of numerous previously identified archaeological sites within the Bates Well region. For the protection of those archaeological resources, detailed location data regarding these sites is not presented herein.

Twelve archaeological sites have been previously located within a three mile diameter area centered on the Bates Well Ranch district. Specific data regarding these resources was not available, but they are likely small resource procurement/processing sites such as mesquite pod gathering loci, temporary habitation camps and/or roasting pits, and are likely attributable to prehistoric Archaic Period inhabitants, the Hohokam cultural tradition and/or the protohistoric/historic period Tohono O'odham and the Hia C'ed O'odham.

Additionally, significant trail segments, including the prehistoric and possibly protohistoric and historic period Native American Shell Trail, and the Spanish and Anglo period El Camino del Diablo, pass through the vicinity of Bates Well.

The Shell Trail, which consists of numerous north-south oriented alignments, extends from the Gulf of California to southern and central Arizona (Hayden 1972; Vokes 1998), and was utilized by the prehistoric and possibly protohistoric inhabitants to gather and transport marine shell to habitation and jewelry production sites throughout southern Arizona. Salt was also transported along these alignments during the historic

period. The Tohono O'odham utilized the trails to move to and from the northern Gulf of California to gather salt. This journey was considered a rite of passage for young males, signifying their entry into adulthood (Underhill 1946). These alignments are significant in terms of their potential to contribute important information pertaining to subsistence, trade and ceremonial activities during the aforementioned periods. Additionally, it is highly likely that additional sites, including temporary camps and resource extraction loci, are located in the vicinity of the trails and may be affiliated with them.

Mining in the Bates Well Region

The Historic period in the western Papagueria begins around A.D. 1700 with the onset of relatively large-scale Spanish colonization. Father Eusebio Kino was among the first to journey extensively in the Papagueria, and established a mission in Sonoyta in 1700. Spanish influence in the Papagueria ended in 1821 with the Mexican revolution, although this had little effect on the average inhabitant of the area. Mining and ranching became important in the western Papagueria shortly after the Spanish Entrada into the region, and in the mid-1800's both began to expand, eventually becoming two of the most important economic factors in the area. Mining had been developing since 1724, but it was not until the 1800s that large-scale mineral explorations began. In 1854 the Arizona Mining and Trading Company was established to recover copper ore from the Ajo area. Due to the lack of water, high transportation costs, and other factors, this operation went bankrupt in 1859 (Greeley 1987:15). It was not until the 1910s that commercially profitable mining activity in the Ajo area developed. The increase in mining activities may have had the effect of stimulating the cattle industry in the western Papagueria. By the early 1900s, there were several extensive ranches in the area including the Gray, Cameron, Childs, Dos Lomitas, Daniels and Miller Ranches, with over 1500 head of cattle.

The copper mine at Growler began in the late 1880s, and productivity peaked in 1916. The 1925 work of Kirk Bryan, specifically the 1922 water-sources map therein, surveyed in 1917, shows two wells (Bates Well and Daniels Well) at the Bates Well Ranch site with none at Growler Mine, not even an abandoned well or dry hole. However, reference has been made to Growler Mine shaft having at times been filled with water. (Rutman 2007)

A context study of historic gold and silver mining operations in Arizona produced for the State Historic Preservation Office identifies the following property types associated with mining in Arizona: (Keane and Rogge 1992: 59)

EXTRACTION PROPERTIES

Exploration

Prospect holes, shafts, and adits

Claim markers

Development and Production

Placer mines

Hard Rock Mines

PROCESSING PROPERTIES

Milling (for example: arrastras, stamp mills)

Smelting

ASSOCIATED HABITATION AND COMMERCIAL PROPERTIES

Camps

Boom Towns

The only existing remnant of the Bates Well Ranch site's association with mining is the existence of an arrastra, a stationary stone grinding wheel used to pulverize the ore using a dragstone pulled by a horse or mule. The arrastra required water which was added to make a fluid mixture to which a measured amount of mercury (quick or quicksilver) was added toward the end of the grinding cycle" (Kelly and Kelly 1983:86). Many of the arrastra stones are granite and may have been taken from the nearby Growler Mine areas. (Rutman 2007) It is unlikely that any extraction properties were located at the ranch site, but the arrastra provides evidence that at least rudimentary processing properties were located on site. It is possible that some of the extant structures on site were developed for mining purposes, for either processing or as a camp, prior to the sites use as a ranching hub, but no evidence is available to support this.

Ranching in the Bates Well Region

The following is a brief statement, based Tom Van Horn's National Register of Historic Places nomination form, regarding the development of ranching within southern Arizona as it applies to Bates Well Ranch. A more thorough context statement regarding the complex history of ranching within Organ Pipe Cactus National Monument is concurrently being prepared by the Preservation Studies Program at the University of Arizona.

Cattle were first brought into Arizona by Don Francisco Vasquez de Coronado on his expedition north from Mexico, 1540-1542. This journey preceded the trail drive, a practice of the cattle industry used to get the animals to market. In 1696 and early in 1697 cattle ranching started in Arizona when Padre Eusebio Francisco Kino placed some cattle, sheep, goats, and horses with the Tohono O'odham Indians of Mission San Xavier del Bac and with the Sobaipuri Indians along the San Pedro River at the Quiburi Rancherias.

Cattle-raising was often coupled with horticulture, agriculture and mining. This was true of the Spanish missions and Indians in southern Arizona of the seventeenth and eighteenth centuries. It was also characteristic of William Kirkland's 1857 operation along the Santa Cruz River at Canoa, about twenty miles north of Tubac. He is credited as being the first Anglo to take up ranching in Arizona.

After the Apaches were subdued by the United States army in the 1870s and 1880s following the Civil War, the presence of Americans increased as they began to enter and settle the area obtained from Mexico through the Gadsden Purchase in 1853-1854. The pursuit of ranching as a primary and specialized activity was a consequence of the "taming" of the frontier, although frontier conditions still existed that required a great deal of ingenuity to adaptively and creatively use a combination of local and imported materials for construction, that is, the use of miscellaneous materials at hand (Appleman and Jones, p. 51).

In various parts of Arizona, cattle raising had assumed the aspects of a business enterprise by 1880 and the building of the Southern Pacific Railroad, the state's first, was of paramount historic importance towards that end. By 1916, the town of Ajo had been linked with the Southern Pacific by the Tucson, Cornelia, and Gila Bend Railroad (Walker and Bufkin, p. 46; Dollar, p. 44). That coincided with the establishment of the New Cornelia (Copper) Mining Company at Ajo and the stimulation of the cattle industry in the vicinity of Ajo. The Ajo railhead eliminated the necessity for a long trail drive, and the developing mining community provided a local market for beef. Cattle-raising by the 1920s had become a significant part of Arizona's economy along with copper mining, lumbering, citrus, sheep raising, and tourism.

No reference exists to the Bates Well area serving as a hub for ranching activities before 1913, when Reuben Daniels (1878-1926) was known to be running cattle on property he acquired from W. B. Bates. Although there are earlier references to cattle and horses in the Sonoyta Valley (Mexico), largely referred to stock-raising south of the international line (Greene, p. 58), 1913 is generally accepted as the time cattle-raising began at Bates Well. Reuben Daniels was married to an O'odham woman, Vivana Orosco, and they had six children.

The Sonoran desert setting of the western Papagueria sparsely contrasts with the more lush, grassy environment of the Santa Cruz and San Pedro rivers to the east where ranching began in Arizona. Starting in 1919, Robert Lee Gray or Bob (1875-1962) and three of his sons — Henry (1897-1976), Jack (1909-1975), and Robert Louis or Bobby (1912-1976) — eventually came to control, as the Gray Partnership, virtually all of the ranching interests in what became the Organ Pipe Cactus National Monument in 1937. (Van Horn 1994: 17) A fourth son, Ralph, who appears to have had some part in the ranching operations sold his interest to Bobby Gray in the 1940s and moved to California (Greene 1977a:59).

Bob Gray was born in Little Rock, Arkansas, but moved to Texas as a very young man to work for a big cattle outfit. By age 17 he had become a seasoned cowboy and married Sara (known as Sallie) Amanda Cope, a cattleman's daughter from San Angelo, Texas. They moved to Fort Stockton, Texas in 1892 at which time Bob had become an independent cattleman. They eventually had nine children – five boys and four girls. Sometime before 1912, the Gray family moved to San Simon, Arizona. They drove a wagon pulled by two mules and brought cattle and horses with them, averaging fifteen to twenty miles a day (Hoy: 1970, 166). Bob and Sallie's youngest child, Robert Louis, was born in San Simon in 1912. Two years later in 1914 the family moved again to a ranch in French Joe Canyon near Benson, Arizona. Following five years of ranching there, Bob Gray purchased a ranch from Lon Blankenship farther west on the border with Mexico in what is now Organ Pipe Cactus National Monument that included roughly 300 head of cattle. This purchase included the Blankenship ranch house (built in 1914), corrals, windmill, Gachado and Dowling line-camps, Aguajita and Williams Springs, and virtually unlimited, unfenced grazing lands (Hoy, p. 166). Beginning in 1919 with the Blankenship (Dos Lomitas) property; Gray acquired ranches, line camps, and other properties for various aspects of cattle raising including: Aguajita Spring, Alamo Canyon Ranch, Bates Well Ranch (obtained by Henry Gray in 1936), Bonita Well Line Camp, Bull Pasture, Cement Tank, Dowling Ranch, Gachado Line Camp, Hocker Well, Pozo Nuevo Line Camp, Pozo Salado, Red Tanks Well, Wild Horse Tank, and Williams Spring, all within what is now the Organ Pipe Cactus National Monument. By the 1920s, Bob Gray and his sons had become one of the dominant ranching outfits in the Sonoran Desert between Ajo, Arizona, and the international border.

Bob Gray is described as a feisty, indomitable, rawhide cattleman... the quintessential frontier cattleman (Hoy, 165, 170), as well as an astute businessman and property manager (Greene, p. 59). He and his sons, Henry, Jack, and Robert Louis, who all lived out their lives in what is now the Organ Pipe Cactus National Monument, would hire Tohono O'odham Indians and Mexicans when extra cowhands were needed "to help with round-up and branding work" (Hoy, 169). Some of these individuals were long in the employ of the Grays, such as Chico Gomez, an O'odham who worked for Bob, and then for Henry. Bob Gray and his family shopped, generally by horseback in the early days, both north and south of the international border, and Bob was known north in Ajo and south in Sonoyta as a colorful character as well as a respected member of the frontier community. He and the rest of his family, "learned to work with the desert and with their Anglo, O'odham, and Mexican neighbors very well" (Hoy, p. 169). (excerpt frrom Van Horn: 18)

At the Blackenship (Dos Lomitas) Ranch in 1919, with the cattle they shipped to Ajo by rail and herded south to their new ranch and the cattle they bought from Lon Blankenship, they had "roughly a thousand (1,000) head" (Hoy 1970:166). To compare the increase in the number of grazing cattle over time in southeastern Arizona, there were about 1,800 cattle in Pima County in 1870 (Clemensen 1989:61). "By 1892, the yield in cattle shipped from Pima County was 121,000 head: (Spicer 1986:137). "It appears to be a general practice of Desert Cattlemen in all sections of the country around Tucson, Arizona, to run all the range can carry in good years in the hope that during unfavorable seasons, enough of them will survive the drought and lack of feed (forage) that they can make up the difference in good years" (Ratcliff 1942, quoted in Hoy 1976:228. After the establishment of the monument in 1937, annual grazing permits issued by the National Park Service to the Gray Partnership ranged from 550 cattle to 1,050 a year.

The frontier-border ranching style of the Grays is noted for its use of miscellaneous salvage building materials and for a series of ranches and line camps within a day's ride from each other with ranch houses, bunkhouses, tackrooms, wells, windmills, and corrals. The Grays' distinctive pattern of cattle-raising can be represented in another ranching component, trigger gates, which were used to roundup the cattle when they came in for water from the open range. According to Wilton Hoy in his 1975 compilation Organ Pipe Cactus Historical Research, "roundups...were...made by trapping the cattle at given water holes surrounded by a corral and a gate through which they could enter but not leave" (p. 227). Rather than riding the range to round up cattle in the traditional manner of the American West, ranchers of Northwestern Papagueria, including the Gray family, selected the hot, drought season when natural (watering) holes dried up. They ran water inside the corrals and closed them with trigger gates. So when cattle entered the corral through the V-shaped gates that pointed into the corral, barely allowing passage in, they could not exit the gates (Hoy, p. 169). The two corrals, main ranch house, and outbuildings such as the blacksmith shop, bunkhouse, hay barn, and tack house, are representative of the distinctive pattern of the Sonoran desert cattle ranching practiced by the Grays with main ranches and line camps.

The distribution and historical function of these ranch headquarters and line camps were determined in a cultural-ecological way by the need to have watering spots for livestock in the open-range grazing pattern of Sonoran Desert ranching. This required the regular migration of the cattle to fresh grasslands and water sources. The Grays consolidated this pattern and perpetuated it for fifty-seven years of ranching within what is now the monument. The Gray ranching operation continued until 1976 with the deaths of Henry and Bobby Gray.

The Bates Well and Blackenship (Dos Lomitas) Ranches, as well as the Gachado Line Camp are listed on the National Register of Historic Places. The ranches at Bates Well and Blackenship complement the line camp at Gachado as the two main ranch headquarters of the Gray operation. The other ranching properties in the monument are considered ineligible because of integrity issues.

A short description of common properties associated with ranching in Arizona, and relevant to the Bates Well Ranch site, has been included from a context study prepared by the Arizona State Historic Preservation Office: (Collins YEAR: 82-92)

Ranch Houses Typically, the ranch house was the focal point of a ranch and served two important purposes. It served as the residence for the ranch owner and his family and as the ranch's main office. Ranch houses vary greatly in size, level of workmanship, and architectural styles. The ranch usually serves as the focal point of the ranch.

Wells A well is a place where water is drawn up from the ground for use. It differs from a spring in that it is not a natural occurrence and usually is made by either digging or drilling a hole in the ground. The simplest well is little more than a deep hole into which groundwater seeps. The image of a well as a hole where water is drawn up with bucked secured to a small pulley built over the well is well known, but such wells are rare in Arizona. More often wells are drilled deep into the ground and a pipe connects the groundwater to the surface. Furthermore, most wells have to have some sort of pump to draw up the water. The twentieth century introduced electric and gas powered pumps, many wells depend on the power of the wind to draw up water.

Windmills As described in the context above, windmills are a common means of powering pumps, particularly in isolated areas where other sources of power are difficult to obtain. A windmill is a structure with large fan blades that are turned by the wind. This rotational energy is transmitted through gears and shafts to the pump.

Water tanks A water tank is a structure built to hold the water that is drawn from the well to make it available for cattle drink. Water tanks may be constructed of concrete, metal, wood, or other materials. This property subtype differs from a stock tank in that it is functionally tied to the well and is usually located in close proximity. A stock tank may be a much larger structure that gets its water from sources other than a well.

fences A fence is a structure built to demarcate a boundary and to limit movement from one area to another. The most common fence associated with cattle ranching is the barb wire fence, constructed of of barbed wire strung between metal or wooden poles. A ranch may contain many miles of fencing that define grazing areas, boundaries to other land jurisdictions, or that limit cattle access to other ranch properties such as fields or homes. The presence of of fencing on ranches is one of the primary distinguishing property types between the pioneer era and modern cattle ranching. In the Spanish, Mexican, and pioneer American eras, cattle were left to graze on the open range. Before the invention of barbed wire, fences were expensive to build and were limited to the areas around the ranch house where cattle were not wanted, such as the the home or garden.

Auxiliary Buildings A working ranch requires a number of auxiliary buildings such as corrals, bunkhouses, barns, and sheds. These provide working a living space for ranch employees, storage space for equipment, and specialized structures for the management of cattle. These buildings tend to be utilitarian in character.

Line Camps Line camps are a distinctive class of auxiliary buildings. Unlike the above listed auxiliary buildings, line camps are not part of the central ranching complex. They were built on the ranch at wide-

spread distances as places where ranch emplyees could reside while riding the fences, maintaining the windmills, and other tasks necessary on the range. More than the central ranching complex. The line camp conveys an essential feature of Arizona ranching with its reliance on large spaces to overcome the arid climate. In an era where horses where the primary means of transportation, line camps line camps where needed because cowboys might need many days to travel the extent of a large ranch. While the Bates Well Ranch site is not a line camp, there are several line camps sites associated with the Gray's ranching empire. The most visible being the Gachado Line Camp, which is individually listed on the National Register of Historic places.

Chronological Development And Use

The following is a brief statement, based on Tom Van Horn's National Register of Historic Places nomination form, regarding the development of the Bates Well Ranch site.

The chronological development and use of the Bates Well Ranch district as defined by the National Register of Historic Places nomination form begins with the arrastra, built around 1909, representing the mining period of this site, and is completed in large part in 1935 when the majority of ranch buildings are presumed to have been built. The final element, the Main Ranch House was moved to the site from the Growler Mine in 1942. Evidence of previous occupation, including prehistoric settlements and transportation systems, and elements, including the Hohokam and O'odham village sites were considered non-contributing elements in the National Register nomination and are not included in this section, but still offer potential to yield significance for future interpretation.

The original Bates Well, after whom the ranch is named, was probably dug in 1886 by W. B. Bates, a settler and probable Confederate soldier (Greene, p. 89). Explorer Carl Lumholtz visited an area he calls "Bates Well" during a 1909-1910 trip, but which is more likely the Growler Mine area, about a mile west of Bates Well. He describes his visit, and the area itself, as such:

"I improved the occasion by taking a trip farther up in Arizona to Bates Well, or El Vait, as the Mexicans name that locality, and which is now curiosly called the Growler Well. There is a copper mine here, but work has been suspended, and the place is inhabited by very few people. An American who was in charge of the mine and store received me hospitably. He invited me to a square meal or two, presented me with some copies of magazines and recent newspapers, and above all, helped me with a new supply of rope, for my outfit, of which I was sadly in need." (Lumholtz, pg. 290)

The only remnant of the mining period at either site is the arrastra at the Bates Well Ranch site, which may have been there at the time of Lumholtz's visit. The arrastra is associated with small-scale gold mining, and dates to the Bates period. The arrastra could also be part of the improvements made by Reuben Daniels circa 1913, as he was known as both a miner and cattleman (Bryan, p. 358). However this is unlikely as the Growler Mine would still have been operational at the time. This arrastra at Bates Well is the only one extant in what is now the national monument.

Reuben Daniels, who acquired ownership of the Bates Well area in 1913, made improvements in the form of buildings, corrals, and wells. The original Bates Well caved in soon after ownership of the area transferred to Daniels and he dug another near it, maintaining the Bates name for the well. In 1915, Daniels and Charles G. Puffer dug a third well near Growler Wash to the southwest of the original well. In Kirk Bryan's The Papago County, Arizona: A Geographic, Geologic, and Hydrologic Reconnaissance with A Guide to Desert Watering Places, he describes "two wells, corrals and ranch houses (in) the Bates Well-Growler Pass area about 1920" the two wells being the Bates and one he named Daniels Well (p. 181). The only remaining elements from the Daniels period are the sites of the newly dug Bates Well, and the Daniels Well; the National Register nomination assumes that the other structures mentioned in the Bryan publication from the Daniels period no longer exist.

Daniels sold Bates Well to the brothers John and Samuel McDaniels. The latter went to work in the New Cornelia Copper Mine at Ajo, Arizona, in 1922 and sold his half interest to Albert Behan, a one-time deputy sheriff of Ajo, who in turn sold that interest back to John McDaniels. John received some financial backing in Tucson and built a ranch house at Bates Well "with intentions of organizing a guiding service for fishing at the Gulf of California. However, the house inexplicably burned" (Hoy 1970:164).

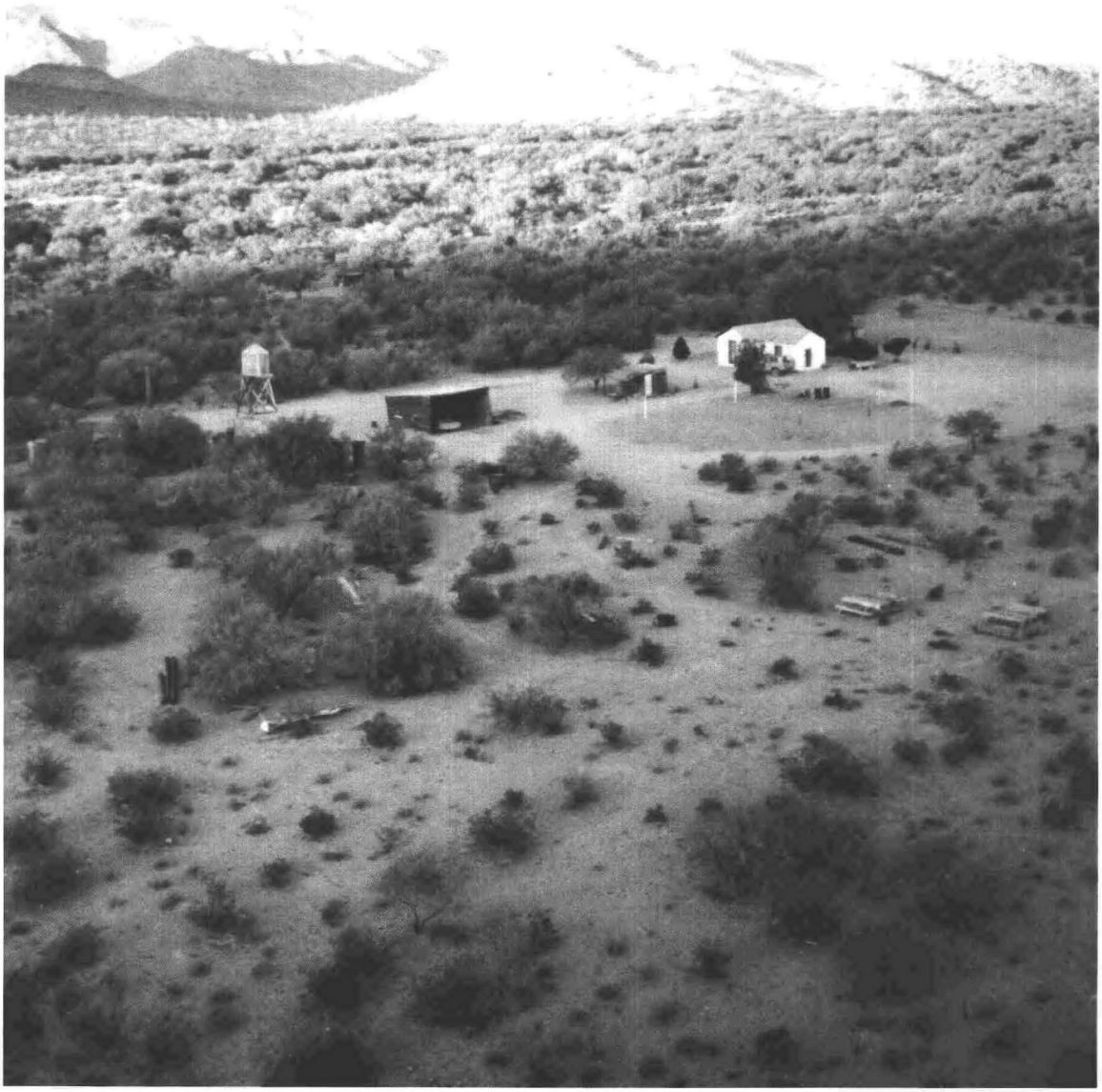
Henry Gray bought Bates Well in July 1935 from John McDaniels, and quickly began making improvements as an extension of the Gray Partnership cattle-ranching operation based at Dos Lomitas. The buildings and structures, documented as having been built c. 1935 by the National Register nomination, include bunkhouses, a tack-house, corrals, blacksmith shop, windmills, a residence, and shed. In 1942, Henry Gray dismantled and moved a house, originally built in 1937 at the nearby Growler Mine, to Bates Well to become the main ranch house. This structure is the only remnant left of the built environment at the mine. An addition to the main house was built to the north side at some unknown time after 1942. These elements built during the Gray period of the Bates Well Ranch, constitute the principal configuration of buildings and structures documented in the National Register nomination in 1994.

The Daniel's Well was destroyed in 1951 by a flood from the Growler Wash and replaced by two nearby wells dug by Henry Gray in 1953. In a 1967 inventory of Monument structures, historians William Brown and Wilton Hoy concluded at the time that, "except for the two wells themselves, the property of Bates Well contains "no historic structures – (it) being occupied by the modern ranch headquarters of Henry Gray" (Hoy, p. 31).

The Gray Partnership ended with the deaths of Henry and Bobby, both in 1976. For better or worse, Bob Gray and his ranching sons – Henry, Jack, and Bobby – shaped much of the cultural and natural landscape of what is now Organ Pipe Cactus National Monument. With the overgrazing of their livestock, the Grays obviously stressed the natural resources of Organ Pipe National Monument, however they themselves did learn to live in harmony with the Sonoran Desert and different peoples and cultural groups on both sides of the border. The Monument is still recovering since the cessation of cattle-raising in 1976.

Physical Description

This sections contains detailed information on all the buildings and structures that comprise the historic Bates Well Ranch site. For each building or structure a brief overview is given, followed by a physical description, which contains location information as well as a description of building materials and methods. An assessment of current conditions follows. The written portion of each sections is concluded with general recommendations for treatment. When available, historic photographs have been included to aid in executing recommended treatments.



Bates Well Ranch looking SW, May 1979, Organ Pipe Cactus NM Photo Archives No.617

List of Buildings and Structures

Name	Construction Date	Type
Main Ranch House	moved to current site 1942	building
Bunkhouse No. 1	c. 1935	building
Tack House	c. 1935	building
Hay Barn / Bunkhouse No. 2	c. 1935	building
Blacksmith's Shop	c. 1935 (likely earlier)	building
Ocotillo Shed	c. 1935	building
Small Residence	c. 1935 (likely earlier)	building
Windmill 2 (historic Bates Well)	c. 1910s (likely earlier)	structure
Windmill 3	c. early 1950s	structure
East Corral	c. 1935 (likely earlier)	structure
South Corral	c. 1935	structure
Arrastra	c. 1909	structure
Bates Well (non-historic)	c. 1951	structure
Windmill 1	1953	structure

Dates are consistent with those submitted for National Register of Hisorc Places nomination form. Dates correspond to the year Henry Gray acquired the ranch. Actual dates of construction are unkown.

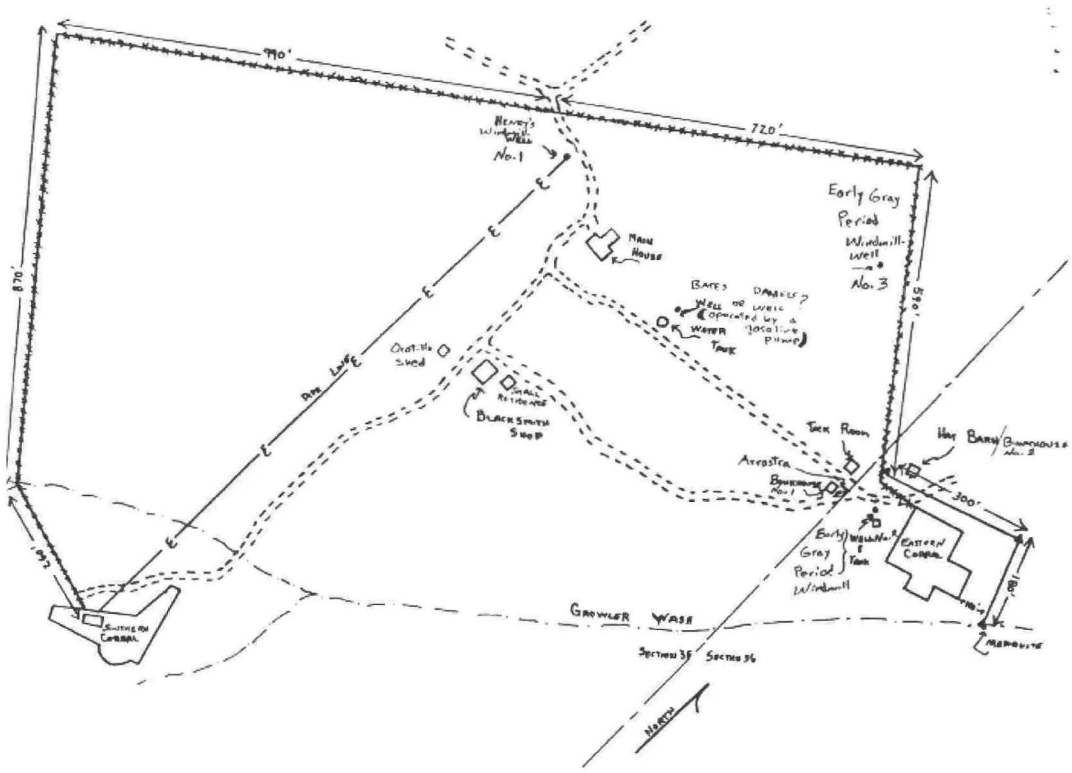
LANDSCAPE

The unique landscape of Bates Well Ranch is a conglomeration of natural and man-made features consisting of native and introduced vegetation, geological formations, individual structures such as fencing, paths, roads, cattle guards, etc., and the way that these features and ranching buildings are configured on the land.

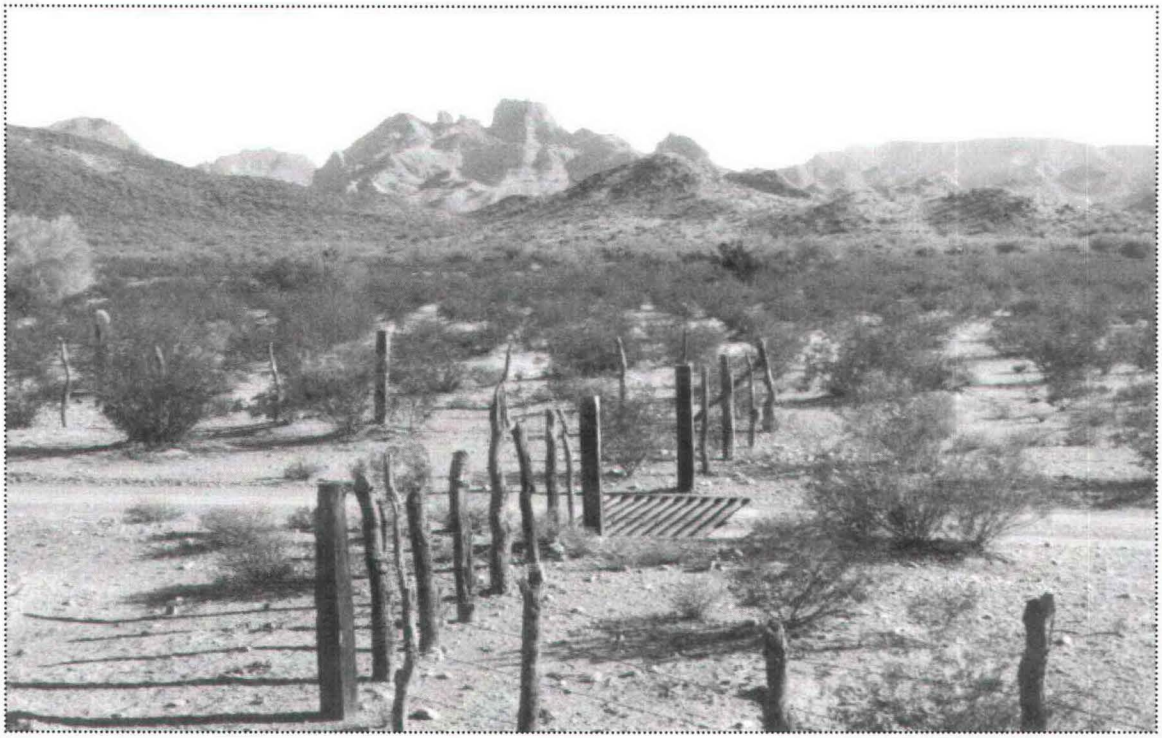
Bates Well Ranch is situated in an alluvial flat surrounded by the Bates Mountains to the east and the Growler Mountains to the west. The property is situated within a mixed cactus/palo verde community bordered by mixed-scrub communities to the east and west characteristic of brittle bush, palo verde, and triangle bursage that grow on the dry volcanic slopes of the Bates Mountains. The ranch is adjacent to Growler Wash. A few introduced species can be found on the site, such as the tamarisk pictured below. Today, the site is occupied by grasses and native plants such as the saguaro, prickly pear and cholla cactus, mesquite and foothill palo verde trees, and creosote bush. (Van Horn 1994: 3-4)

Recommendation for Treatment

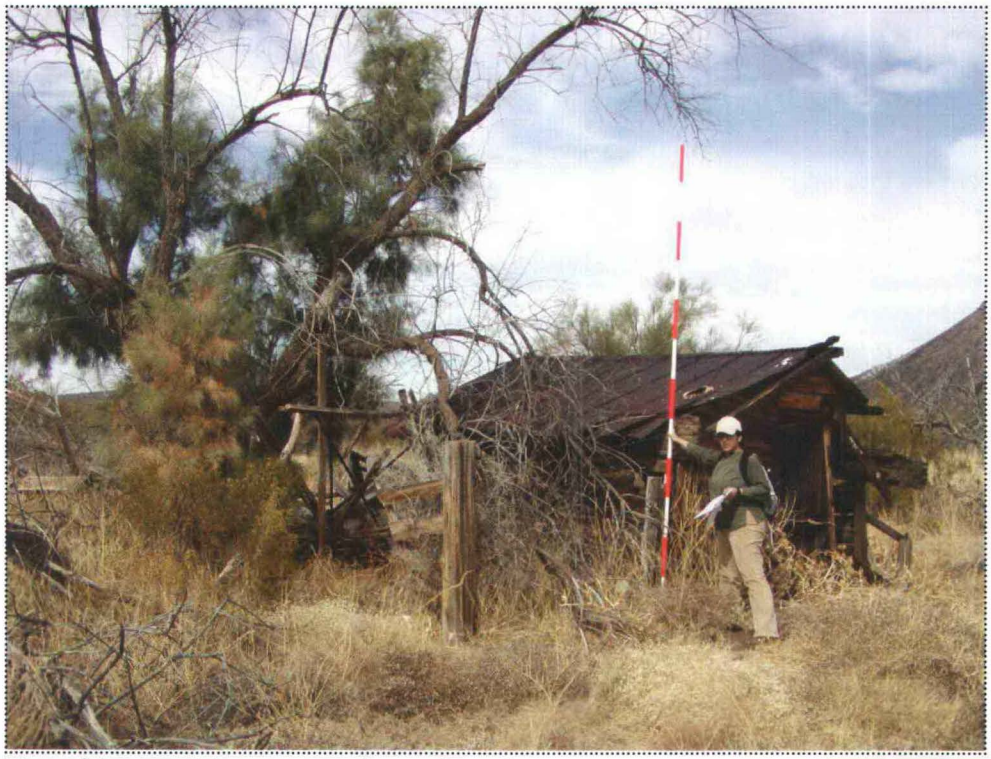
The recommended treatment for the site's character defining features, especially configuration of the ranch complex of buildings, structures, and features and the landscape elements, including roads and the native vegetation, whose relationship to the built features are equally critical to the ranching theme of significance, is Preservation as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties.



Site plan drawn by Organ Pipe Cactus NM staff in 1989, updated in 1992, showing configuration of ranch buildings with connecting paths and roads, and site fencing.



Drift fence and cattle guard on Papago Well Rd approximately 1/2 mile West of Bates Well Ranch, date unknown, Organ Pipe Cactus NM Photo Archives No. 623



View of the tamarisk tree next to the small residence.

Main Ranch House

SHPO Structure #: HS01A

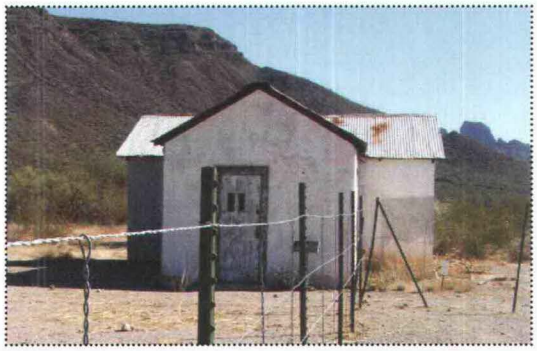
UTM: Zone 12 316074E 3560906N

Significance: High

Condition: Fair

Priority: Critical

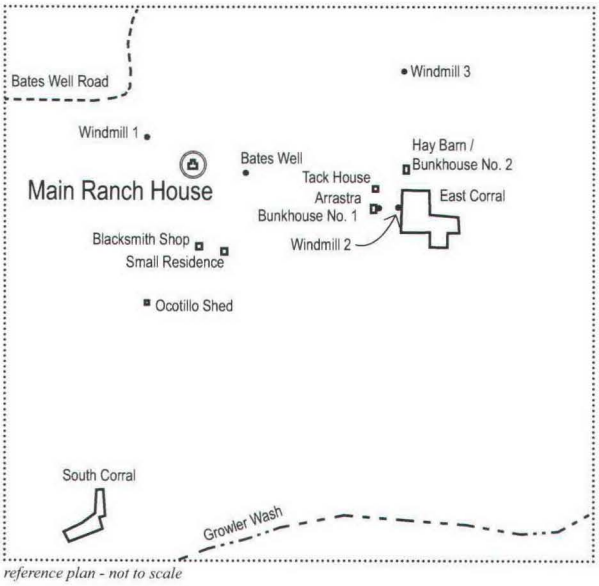
Character Defining Features: Stuccoed exterior walls, corrugated metal roof



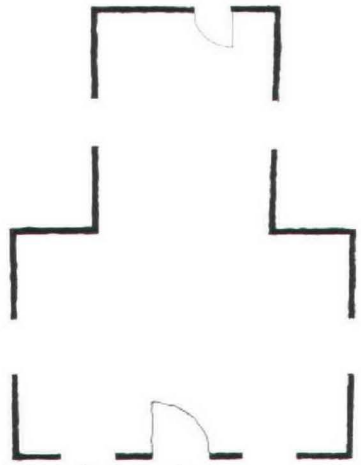
The Main Ranch House is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. The Main Ranch House was the home of Henry Gray from the early 1940s until his death in 1976. It is believed that the larger southern section of the house was constructed in 1936 at the Growler Mine site, approximately 1-1/2 miles to the west, and moved to its present location by Gray in 1942. The northern section of the house was added sometime between 1942 and 1950.

Physical Description

The Main Ranch House is the first building encountered when entering the ranch property and is located approximately 300 feet to the southeast of the intersection of Bates Well Road and the ranch access drive. The Main Ranch House is generally located to the north and east of most of the structures associated with the Bates Well Ranch. The 610 square foot Main Ranch House is shaped like a T in plan, with the kitchen



reference plan - not to scale



reference plan - not to scale

Plan of Main Ranch House

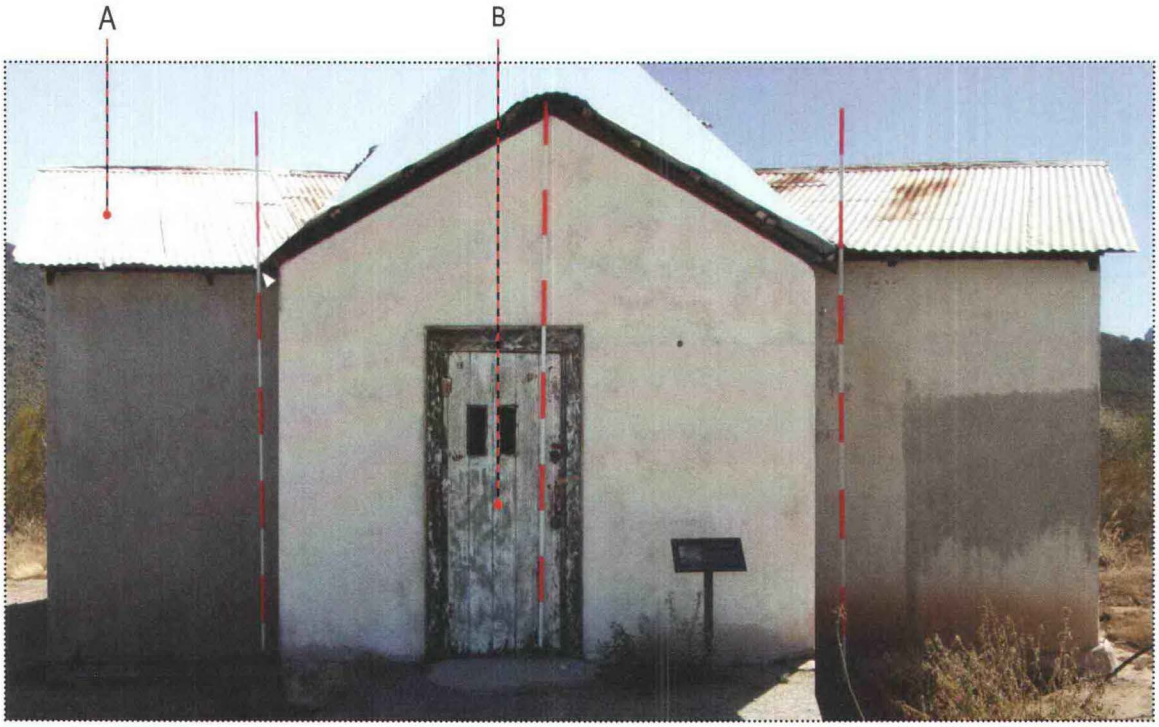
in the northern section and living space in the southern section. The building is wood frame construction composed of milled 2 x 4 wall studs placed 2 feet on center and sheathed on the exterior with vertical wooden planks covered with chicken wire and 1" of white stucco. On the interior, the walls have been sheathed with 1/2" thick 4' x 8' particle board sheets which have been painted. The corrugated metal roof is supported by a system of trusses placed 4 feet on center with the roof attached to 1 x 4 purlins placed at 2 feet on center. The kitchen is finished with wooden cabinets, a sink, and stove. The floor utilizes 1 x 6 tongue and groove planks nailed to wood beams and covered with what appears to be rolled linoleum in the large room and 6" x 6" square units in the kitchen. There are two doors openings: one placed at the center of the south elevation that has been framed in with plywood to create a small window, and one placed slightly east of center on the north elevation. Four large window openings, measuring approximately 2'-6" by 6'-6" pierce the walls of the southern section of the residence, two that frame the door opening on the south elevation and one located on center of each gable end. The north section of the house contains two 4' x 5' windows, located approximately on center of the east and west facades.

Condition Assessment

Of all the buildings that comprise the Bates Well Ranch, the Main Ranch House possesses the greatest level of integrity. The exterior is in good condition with small cracks in the stucco surface. The corrugated metal roof is in need of attention with many holes from previous nails and rusting from age. In order to deter vandalism, the window openings were boarded up in the 1990s by NPS staff from the outside with plywood, with smaller 1 foot by 2 foot openings cut into the plywood and screened with quarter inch steel mesh. The glazing is gone and many of the frames are missing as well. The ceiling material is missing in all but a few areas and there are several pieces of the wall material missing as well. The kitchen cabinets and the stove are intact. The linoleum flooring is peeling back to reveal the wood floor below from the leaking roof but there is no evidence of mold.

Recommendation for Treatment

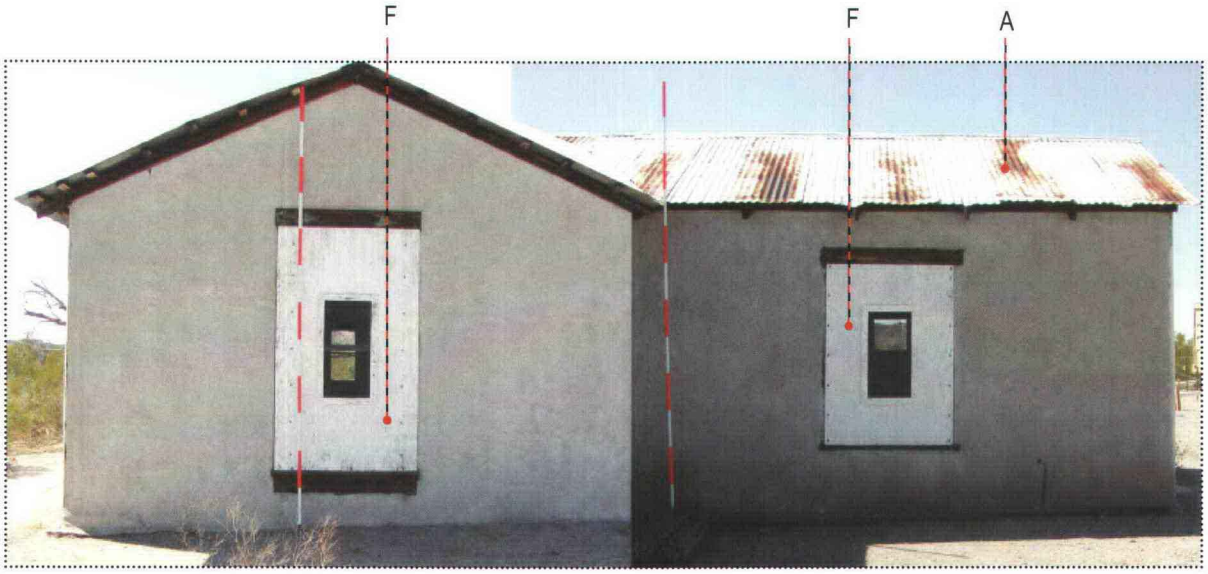
The recommended treatment for the Main Ranch House is *Rehabilitation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



North elevation of the Main Residence (letters refer to notes in condition assessment table below)



South elevation of the Main Residence (letters refer to notes in condition assessment table below)



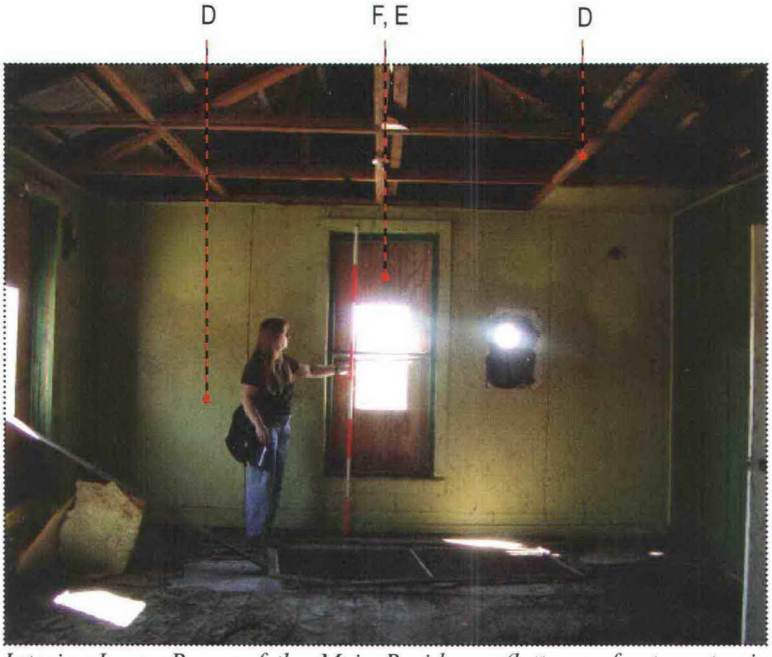
East elevation of the Main Residence (letters refer to notes in condition assessment table below)



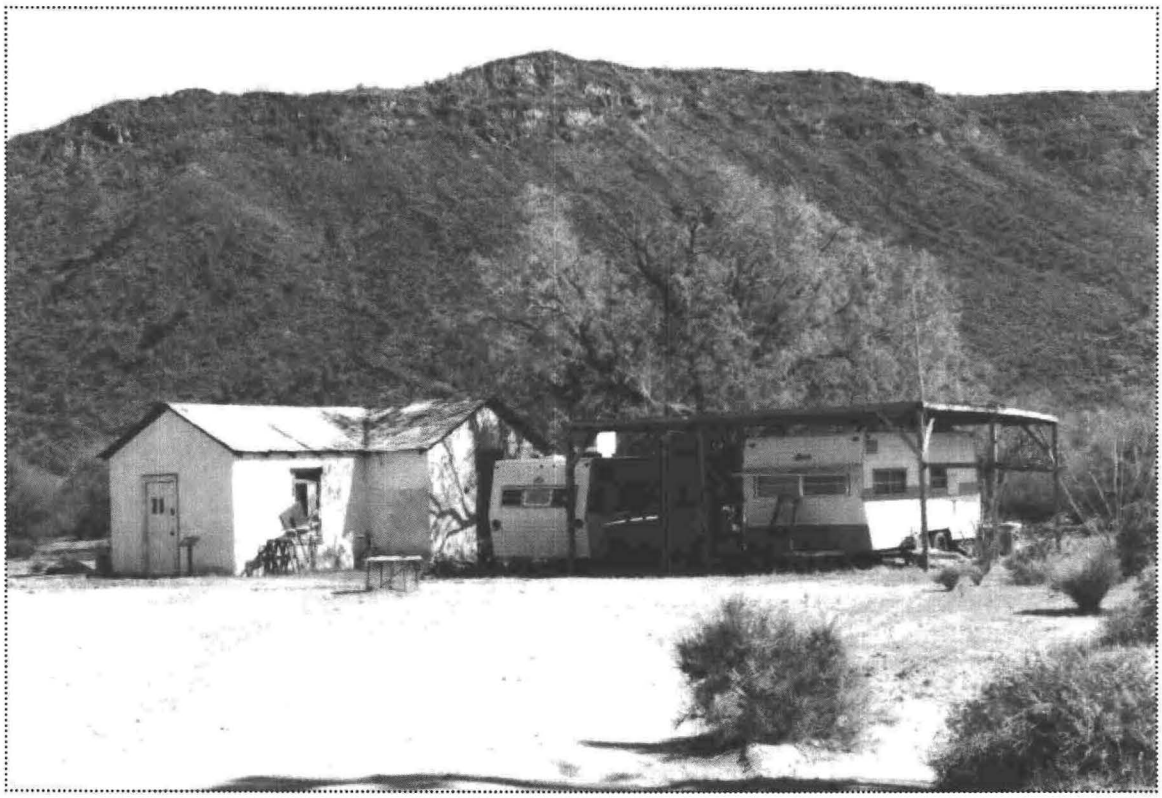
West elevation of the Main Residence (letters refer to notes in condition assessment table below)



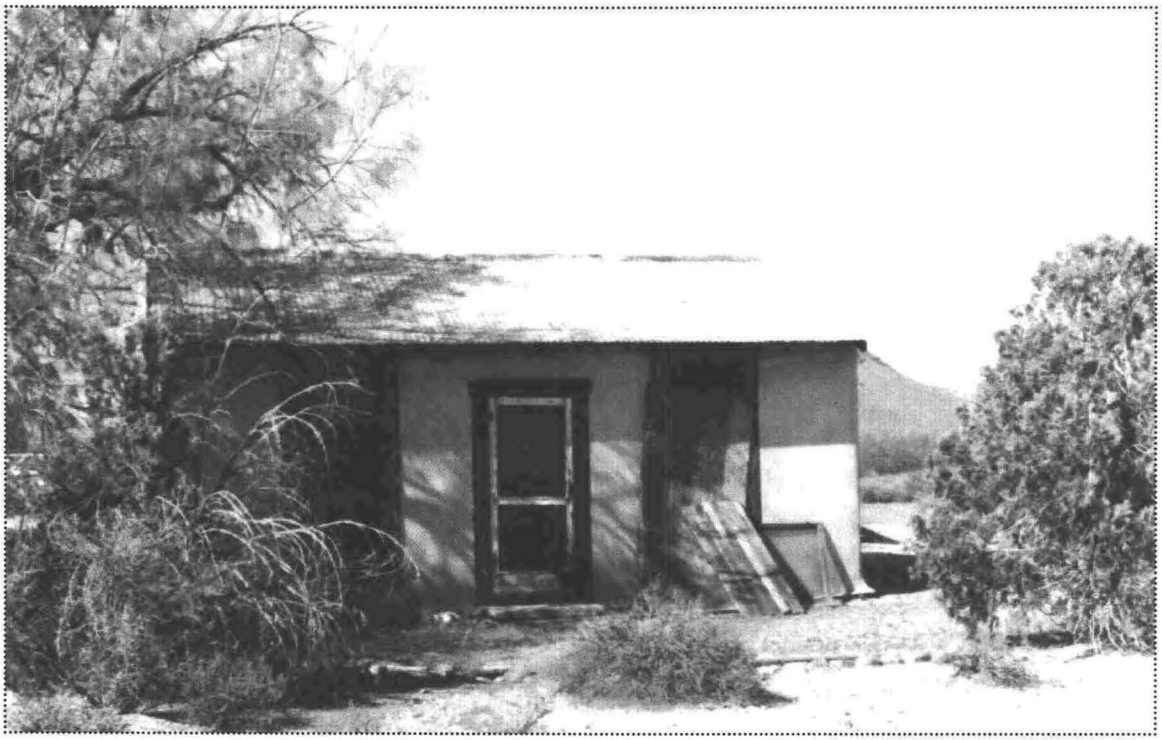
Interior Ceiling of the Main Residence (letters refer to notes in condition assessment table below)



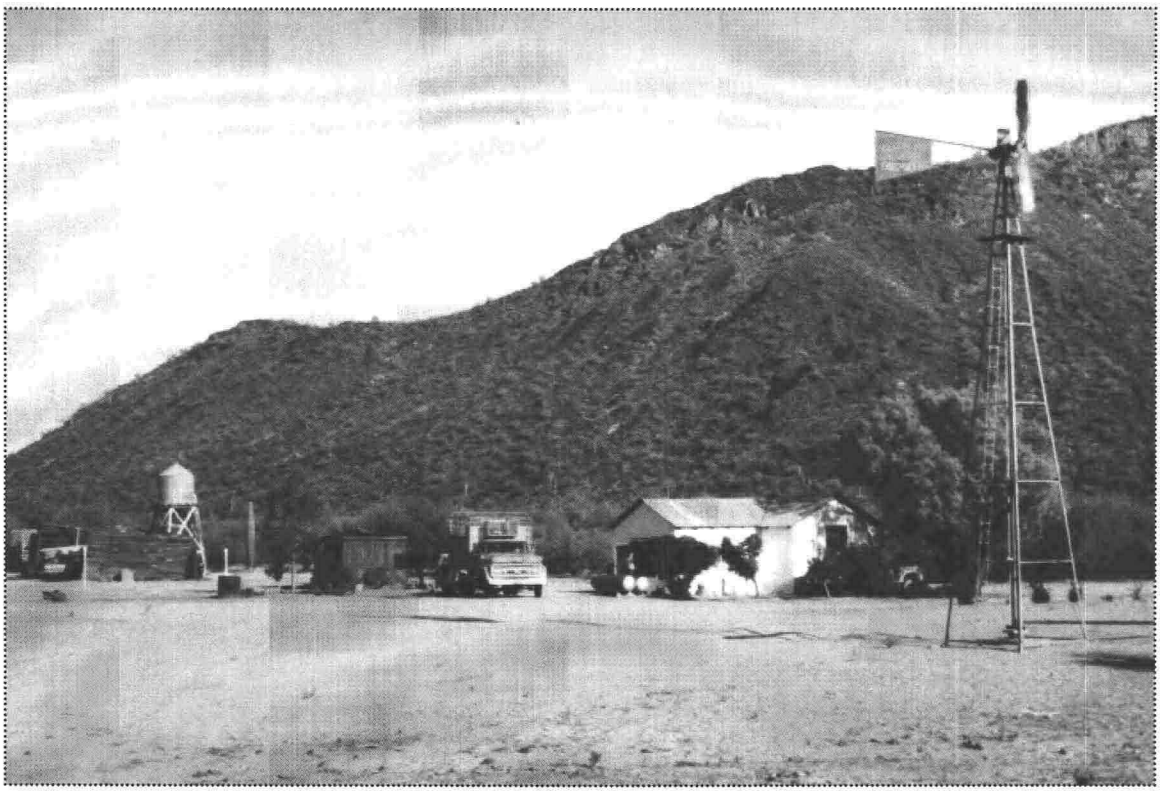
Interior Large Room of the Main Residence (letters refer to notes in condition assessment table below)



Main Ranch House and carport and trailers post-dating the Henry Gray occupancy, 1988, Organ Pipe Cactus NM Photo Archives No. 38



Main Ranch House south facade, April 1989, Organ Pipe Cactus NM Photo Archives No. 3783



Bates Well water tower (left) Main Ranch House (middle), and Windmill 1 (right), date unknown, Organ Pipe Cactus NM Photo Archives No. 621

	Deficiencies	Recommended Treatments	Priority
A	Corrugated metel roof contains nail holes and severe rust damage.	Replace roof with like material	Serious
B	Rotted/termite infested Wood	Application of biocides where severe damage.	Critical
C	Missing Components	Replace lost components with like material	Serious
D	Water Damage	Replace roof and repair or replace damaged material.	Serious
E	Broken Window Framing/glazing	Replace and repair as needed	Serious
F	Window inserts added after period of significance	Remove and return to original state	Critical

Bunkhouse

SHPO Structure No. : HS01E

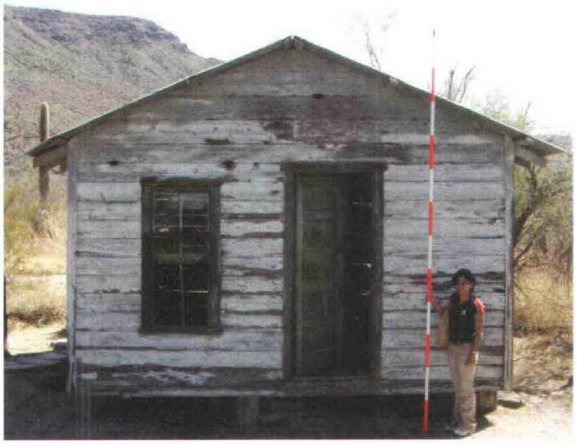
UTM: Zone 12 316225E 3560843N

Significance: High

Condition: Fair

Priority: Critical

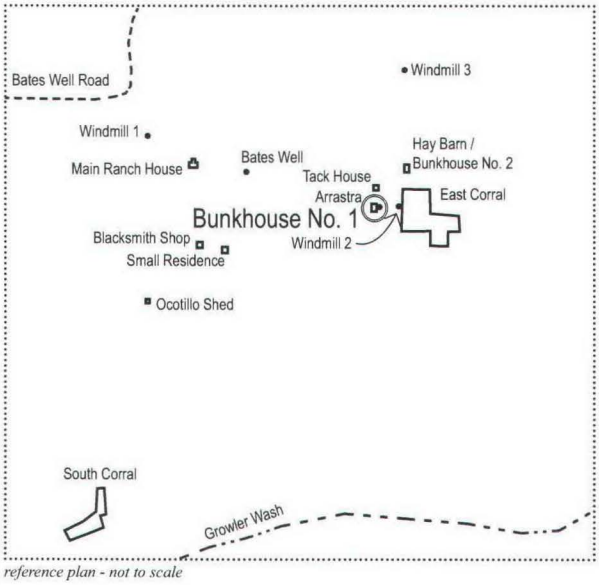
Character Defining Features: Painted exterior, glazed front window & entrance door, interior gypsum board, interior linoleum floor



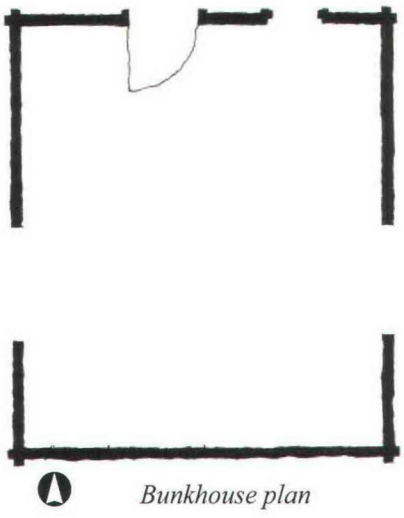
The Bunkhouse is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. The Bunkhouse was constructed within this period, sometime before 1935, and formed a necessary auxiliary building to support the ranching activities at Bates Well. According to NPS staff, the Bunkhouse may have been constructed at Growler Mine and moved to the Bates Well Ranch. The Bunkhouse was used as sleeping quarters by the ranch hands, however there is no indication of any plumbing or electrical facilities.

Physical Description

The bunkhouse is located at the center of a large cluster of buildings on the Bates Well Ranch site that surround the East Corral. The Arrastra is located immediately adjacent to the east wall of the bunkhouse. The Bunkhouse is a simple one-room, wood-frame shed approximately 13'7" x 15'7" in size. Wooden rafters



reference plan - not to scale



Bunkhouse plan

measuring 2" x 4" in cross-section provide structural support. There are four such rafters at each corner to make up a composite column. Single 2 x 4 rafters are then evenly spaced between these columns along each wall to provide additional structural support. The wall sheathing has been done by horizontal tongue & groove siding. Unlike any other wooden building on site, the exterior of the Bunkhouse has been painted light blue with green trim. It is raised off the ground by an approximate distance of 9" and rests on wooden piers located at each corner and also along the sides. It appears that there is no formal foundation and the piers are simply set deep into the ground. There are three windows and one entrance door in the Bunkhouse. While the entrance door and the smaller window lie on the north facade, the other two windows lie on the east and west facade. The entrance door is a five panel wooden door, painted green and set in a wood frame. All windows appear to at some point have had screens, somewhat haphazardly, attached with wooden frames to their exteriors. The window adjacent to the door is double-hung with multi-paned with clear glass also set in a wood frame. The east window does not have a screen, but contains the newer wooden frame that likely once held a screen. The window on the west wall is similar to the east window in terms of appearance and dimensions, except that it has a wire mesh screen that is now just barely attached to the wood frame. Also a piece of new wooden siding is nailed directly above the opening. Both the east and west windows are devoid of glazing.

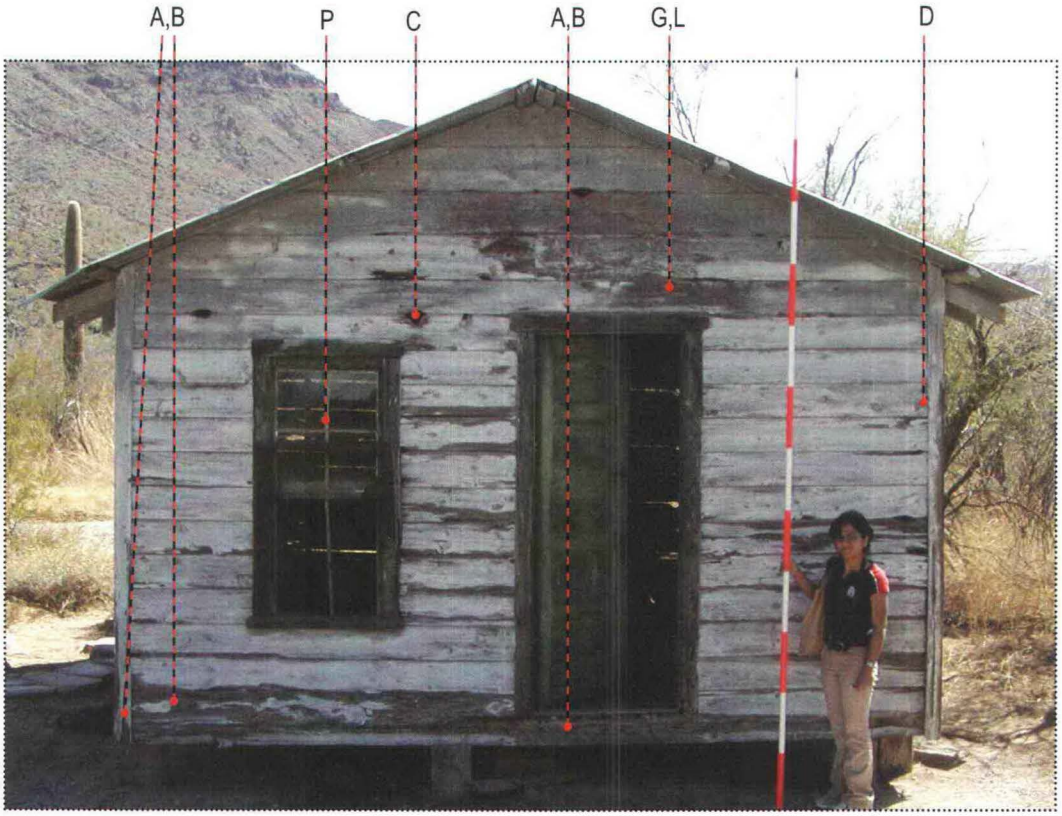
The Bunkhouse has a gable roof supported by a series of nine trusses spanning in the E-W direction. These trusses support secondary 2 x 4 rafters running in the N-S direction. The covering is done with corrugated tin sheets which appears relatively new. The interior of the Bunkhouse displays remnants of linoleum flooring and gypsum board panelling on the wall surfaces. While the interior board panels are completely missing from the south wall, they are present with missing parts and defects on the remaining walls. The gypsum board also appears to have been used for providing a ceiling and covering for the trusses from inside, although at present it is intact in only a few places.

Condition Assessment

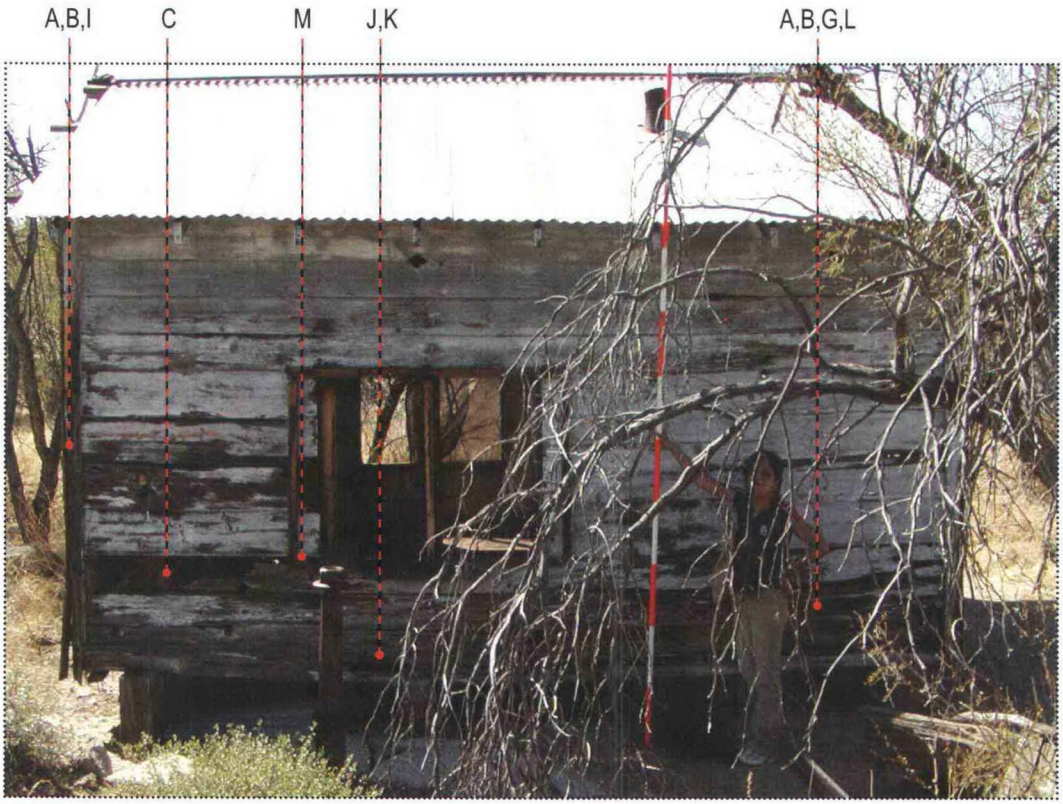
At present, the condition of the Bunkhouse has been assessed as fair relative to the condition of the other ranch structures on site. However, there are many pressing problems which need to be addressed. The structure is tilting towards the rear west corner probably due to settling of the corner pier. In addition, the floor is sagging; this can be clearly noticed on the eastern side. The wooden planks on the facades are also deteriorating due to the combined effects of the harsh climate and the impact of microorganisms. The roof sheathing is relatively new, although it displays signs of detaching itself at the rear. The interior of the building is also in a state of disrepair. The gypsum board paneling on the walls and ceiling is completely missing in parts and also suffers from damage due to water seepage. Only remnants of the original linoleum flooring are left behind.

General Recommendations for Treatment

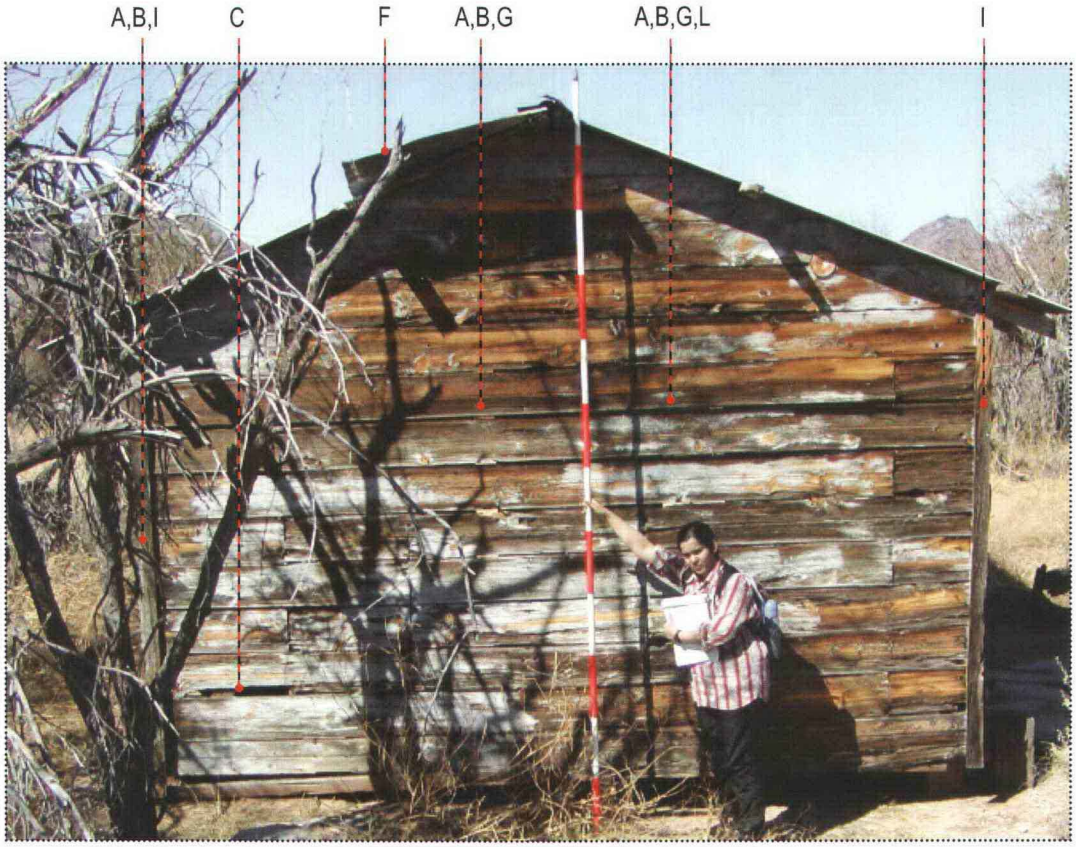
The recommended treatment for the Bunkhouse is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



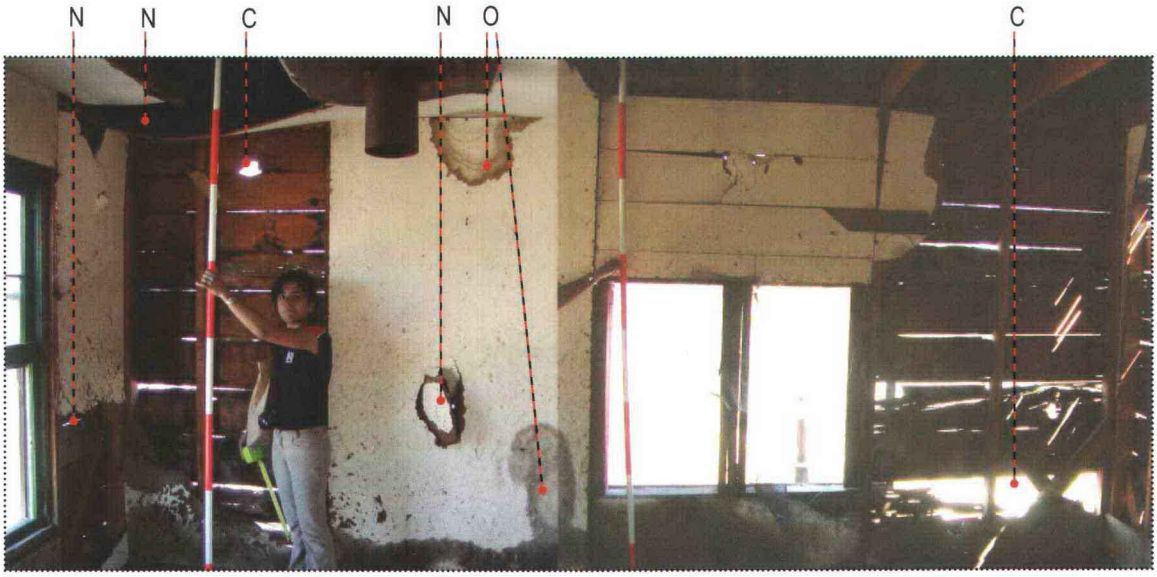
North elevation of the Bunkhouse (Letters refer to notes in condition assessment table below)



East elevation of the Bunkhouse (Letters refer to notes in condition assessment table below)



South elevation of the Bunkhouse (Letters refer to notes in condition assessment table below)



Interior elevation of East wall of the Bunkhouse (Letters refer to notes in condition assessment table below)



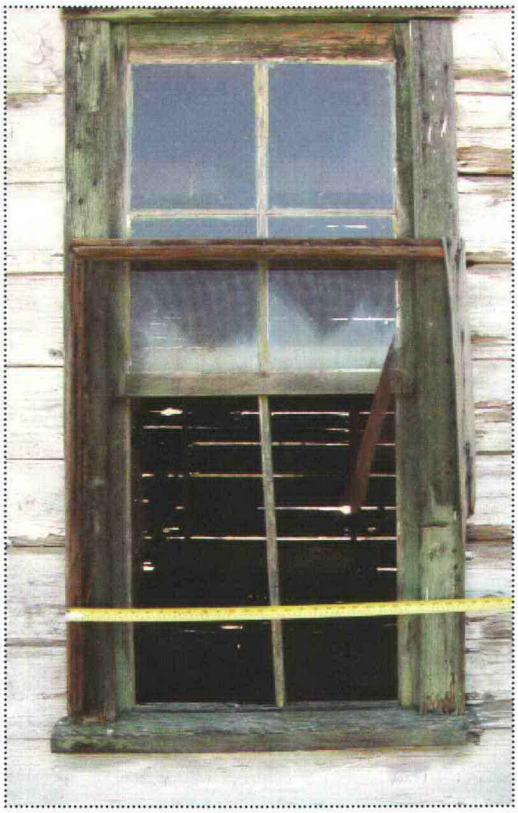
M, A, B. Detail view of window on west elevation. Note the wire mesh screen coming off & new board above opening



View of the arrastra situated right next to the east wall of the Bunkhouse



View of the entrance door from the inside.



M. View of the window on north wall. Note the new frame nailed on top .



View of the roof trusses. Note the relatively new metal sheeting on the roof



Bunkhouse south facade, April 1989, Organ Pipe Cactus NM Photo Archive No. 3781

	Deficiencies	Recommended Treatments	Priority
A	Water damage to wood paneling and facia including warping and splintering.	Remove source of water, replace wooden planks where severely damaged with like material	Serious
B	Rotting of wood due to microorganisms/ pests (also termite) infestation.	Application of biocides where damage is sever	Serious
C	Missing portions of wood planks	Replace entire plank where substantial portions are missing or structural stability is endangered.	Critical
D	Corrosion and deterioration of wood around nails.	Apply anti-rust coating on nails before replacement planks are installed.	Serious
F	Delamination of sheet metal roof	Replace/reattach portions delaminating. If pieces are missing replace with like material	Critical
G	Staining of wood due to water damage.	Remove source of water, which may be due to roof leaks or holes in the cladding.	Serious
I	Leaning of the structural wooden posts leading to instability & leaning of the shed.	Stabilize the structure by realigning the main structural posts. If necessary reassess the condition of the tie-beam and strengthen to bind the structure	Critical
J	Deterioration of planks near the base of the structure.	Missing pieces should be replaced with like material.	Critical
K	Sagging floor.	The cause of the problem should be addressed then entire floor repaired.	Critical
L	Paint cracked and peeling	Reapply paint on facades. New paint should match exactly previous in appearance & texture.	Serious
M	New screen frames nailed onto original facade	New parts should be removed after being documented	Serious
N	Missing pieces from the Gypsum-board paneling & ceiling in the interior	The paneling should be replaced if severely damaged or missing	Serious
O	Water damaged Gypsum-board	Address source of seepage & replace if extensively damaged	Serious
P	Broken window mullions	Repair or replace with like materials	Serious

Tack House

SHPO Structure #: HS01F

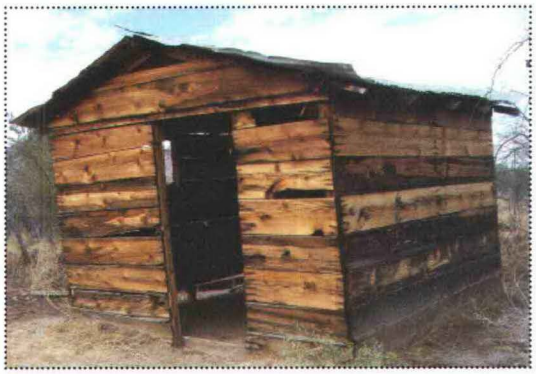
UTM: Zone 12 316226E 3560858N

Significance: High

Condition: Fair

Priority: Critical

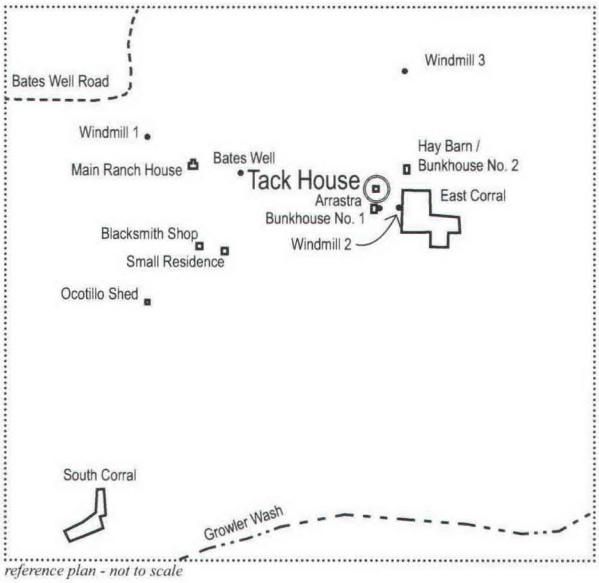
Character Defining Features: Horizontal plank siding, saddle-post on the interior.



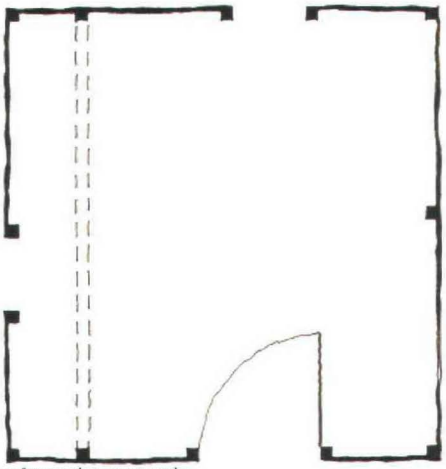
The Tack House is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. The Tack House was constructed within this period, probably around 1935, and formed a necessary auxiliary building to support the ranching activities at Bates Well. The Tack House was used for storing equestrian equipment (tacks, saddles etc.).

Physical Description

The Tack House is a simple one-room, wood-frame shed approximately 12' x 12' in size. There are 4" x 4" wooden posts at each corner and also at the vertical edges of the door and window openings. Forming the primary structural support of the building, these wooden posts are then sheathed by horizontal plank siding nailed from the outside. The wood (probably Douglas fir/ pine) is unpainted and some of the lumber has a relatively new appearance. There appears to be no formal foundation and the wooden posts are most probably simply set in the ground. There are traces of a 2 x 4 tie beam bracing the perimeter of all the wooden posts



reference plan - not to scale



reference plan - not to scale

Tack House Plan

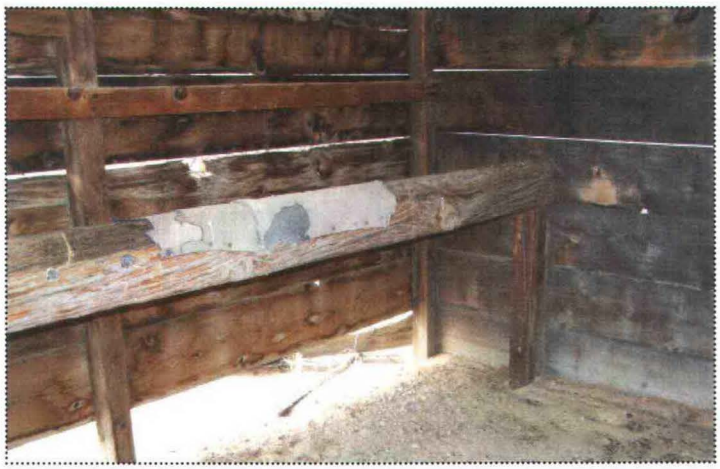
and lying just beneath the ground surface. The inside of the structure has a dirt floor. There is a window in north and west facades, and an entrance door in the south facade. The windows do not have screens and the entrance door has become unhinged and presently is lying inside the building. The structure has a gable roof supported by a series of five trusses spanning in the E-W direction. These trusses support secondary 2 x 4 purlins running in the N-S direction. The roof is sheathed with corrugated sheet metal which have a number of small nail holes in them, probably because they were salvaged to be used on this building. The gable roof has two enclosed platforms on each N-S end that were likely used for storage. These platforms presently house bird nests. A saddle bar runs N-S on the west side of the interior. The saddle bar is approximately 3'-6" high and has remnants of a Navajo blanket and leather nailed to the surface.

Condition Assessment

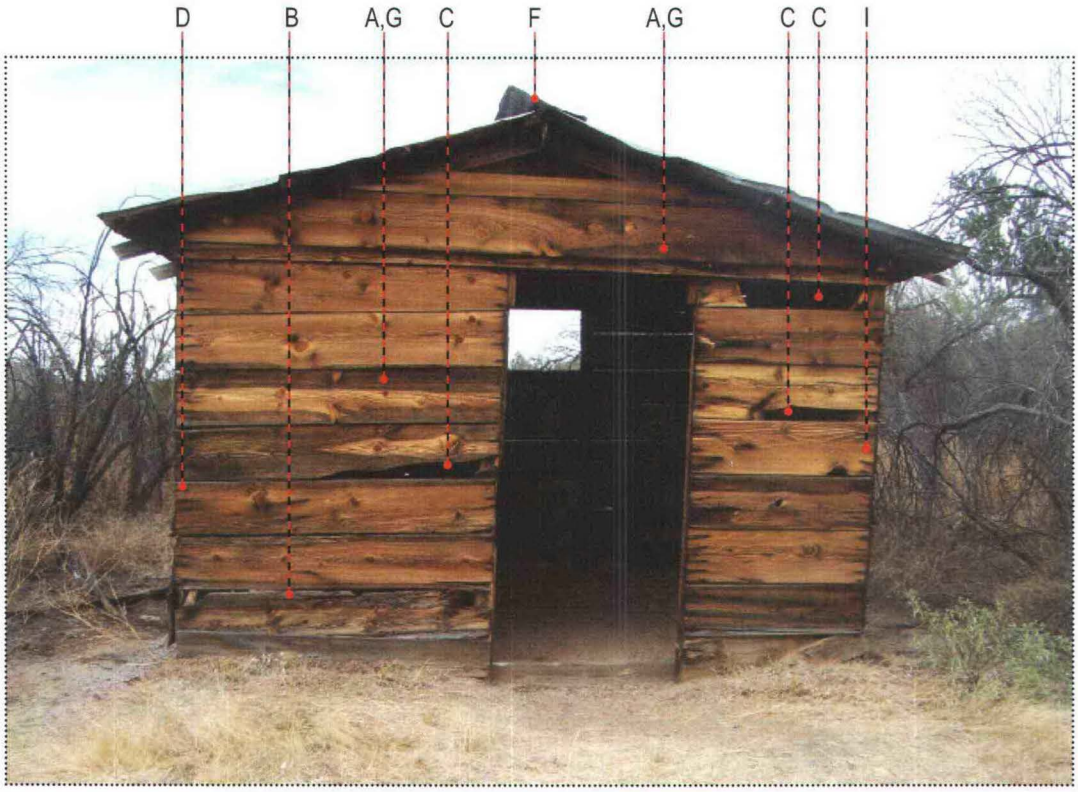
At present, the condition of the Tack House has been assessed as fair relative to the condition of the other ranch structures on site. However, there are many pressing problems to be addressed. The shed is leaning to the east and suffers from bowing of the wooden support posts, leading to instability. The wooden planks suffer from extensive rotting and staining. The major causes are animals / pests and termite infestation. The other major cause is moisture damage. As a result there is rusting at the juncture of wood & iron nails, leading to eventual corrosion of the surrounding wood. Thus either entire planks become disjointed or rotten pieces detach, causing gaping holes in the exterior facade. The corrugated sheet metal roof displays rust damage. Also, several mesquite trees in close proximity to the Tack House may pose a fire hazard.

General Recommendations for Treatment

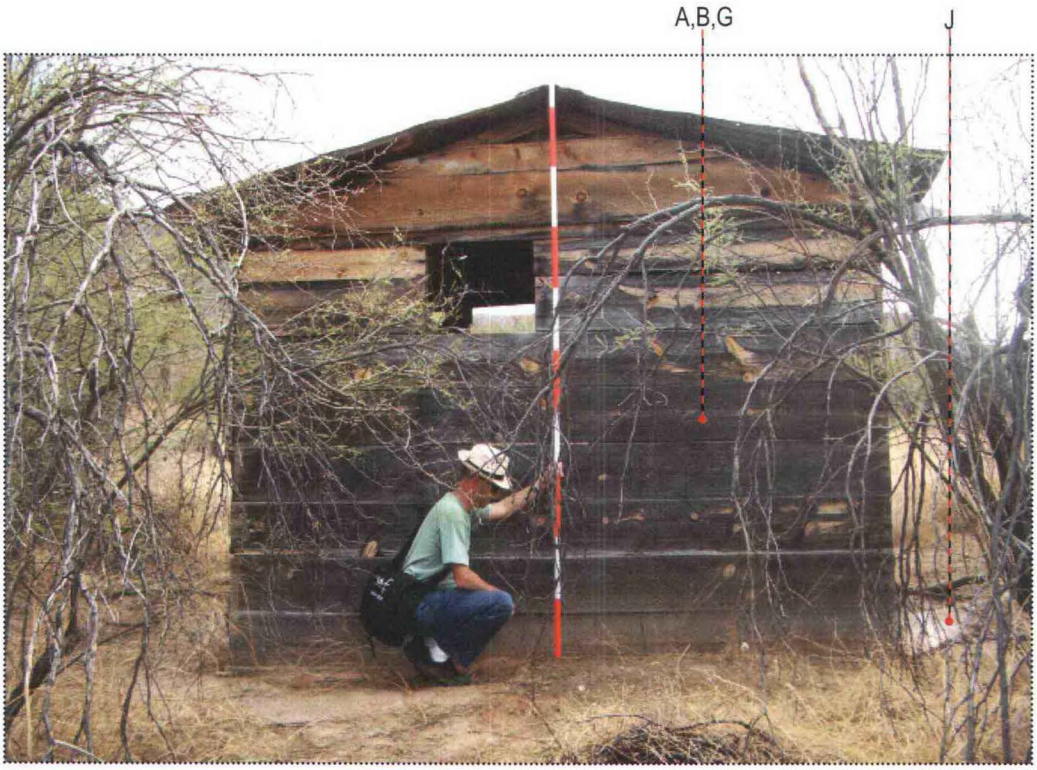
The recommended treatment for the Tack House is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



Saddle bar with remnants of Navajo blanket



South elevation of the Tack House (letters refer to notes in condition assessment table below)



North elevation of the Tack House (letters refer to notes in condition assessment table below)



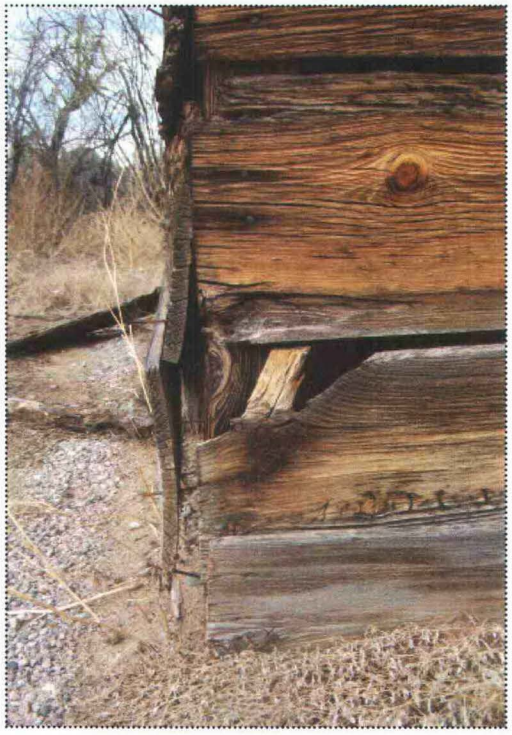
E. Rusting of the corrugated metal roof due to water damage



J. Falling apart of the wooden planks near the base of the structure.



B. Rotting of wood due to microorganisms/ pests (also termite) infestation.



A,B,C. Water damage to wood paneling and facia including warping and splintering & rotting due to microorganisms/ pests.



H. Dis-hinged entrance door lying inside the structure.



K. Pack rat midden in the roof platform inside the structure

	Deficiencies	Recommended Treatments	Priority
A	Water damage to wood paneling and facia including warping and splintering.	Correction of the source of water Replace the wooden planks where severely damaged; match the size & type of wood to existing.	Serious
B	Rotting of wood due to microorganisms/ pests (also termite) infestation.	Application of biocides where severe damage.	Critical
C	Missing parts from wood planks	Replace entire plank where substantial parts missing or structural stability is endangered.	Serious
D	Corrosion and deterioration of wood around iron nails on edges.	Apply anti-rust coating on nails before replacement planks are installed.	Serious
E	Rusting of the corrugated metal roof due to water damage	Replace the sheets which are severely rusted.	Serious
F	Falling apart of the metal sheets on the roof esp. the central ridge	Replace/reattach the portions that are coming apart. Use identical sheeting for replacement	Critical
G	Staining of wood due to water damage.	Correction of the source of water; pay attention to roof leaks & holes in wall panels.	Serious
H	Dis-hinged entrance door	Reattach the door.	Critical
I	Tilting of the structural wooden posts leading to de-stability & bending of the shed sideways.	Stabilise the structure by realigning the main structural posts. If necessary reassess the condition of the tie-beam and strengthen it to bind the structure	Critical
J	Falling apart of the wooden planks near the base of the structure.	These pieces should be nailed back to the structure.	Critical
K	Bird droppings soiling interior of building	Remove bird nest and seal building to prevent further infiltration of birds	Serious

Hay Barn / Bunkhouse No. 2

SHPO Structure #: HS01D

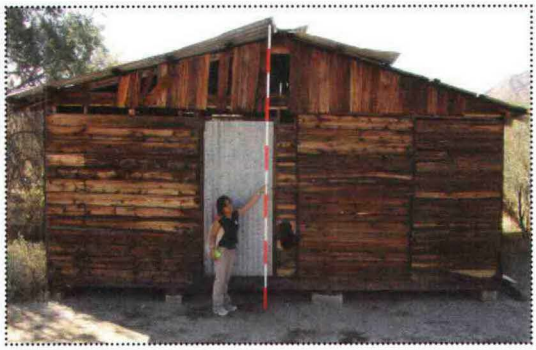
UTM: Zone 12 316259E 3560877N

Significance: High

Condition: Fair

Priority: Critical

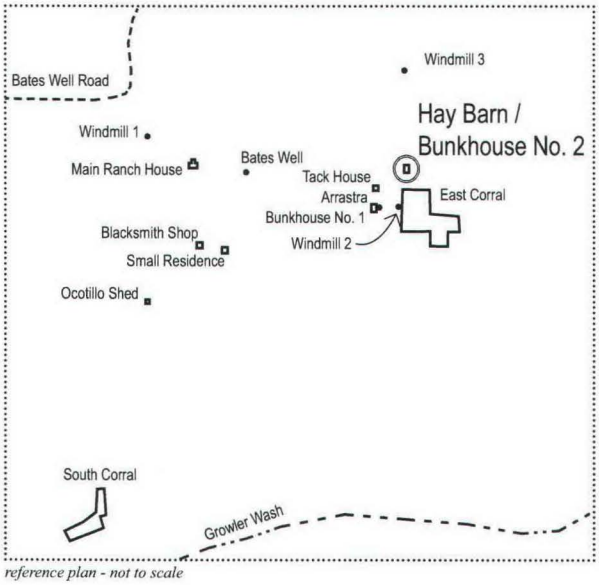
Character Defining Features: Horizontal wooden plank siding, concrete blocks at base.



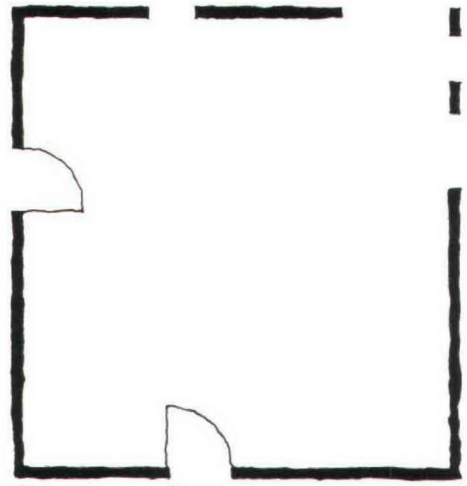
The Hay Barn is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places, under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert L.Gray Sr.'. The period of significance has been identified as 1913-1942. The Hay Barn was constructed within this period, sometime before 1935, and formed a necessary auxiliary building to support the ranching activities at Bates Well. The building was used by the ranchers for storing fodder. Some park documents also refer to this building as Bunkhouse No. 2 which would indicated that this building may have also served to house ranch hands. Two fresnals, large metal scoops pulled by horses used to dredge water catchments, are currently being stored within the Hay Barn.

Physical Description

The Haybarn is located directly north of the East Corral and is part of a larger of cluster of buildings centered around the corral. The various materials and differing sizes, shapes, and age of the members that make up this building speak to the circumstances surrounding buildings built as part of the Gray's ranching operation.



reference plan - not to scale



reference plan - not to scale

Hay Barn Plan

Building materials were few and far between, and salvaged materials were used whenever possible. Materials could have been taken from other ranch buildings, from the nearby growler mine, or from the large copper mine in Ajo, where Ralph and Bobby Gray worked.

The Hay Barn is a large one-room wood frame shed measuring approximately 18'-6" x 17'-6" in size. The Hay Barn is supported by 2 x 4 wooden rafters providing a vertical framework for the horizontal salvage plank siding that is nailed on top. The structure is completely exposed, thus while the plank siding is visible on the outside, the 2 x 4 rafters can be seen on the inside. Also on the inside, shoring can be seen on the south wall, probably introduced at a later date to provide additional support. The Hay Barn is lifted off the ground by approximately 6" and is supported on concrete blocks at different points along the edges. There are four windows and two doors in the building. The doors are located in the south and west facades. There are two windows in the north facade and two in the east facade. The west door is wood, contains a single panel and is painted white. The west door appears to have been salvaged from elsewhere, where it was likely used as an interior door. The door frames appear to have be made out of relatively new lumber. The southern half of the west facade also displays plank siding that looks relatively new. Unlikely the door in the west facade, the door in the south facade is made out of corrugated sheet metal and is set in a wooden frame. The northern-most window on the east facade has a wire mesh screen and a high sill level, while the adjacent window has been partially covered on the outside with corrugated sheet metal, and has a remarkably low sill level. Similarly, windows on the north wall two have different sill heights, with the eastern-most window having been set lower than the window to the west. Neither of the windows on the north facade are screened.

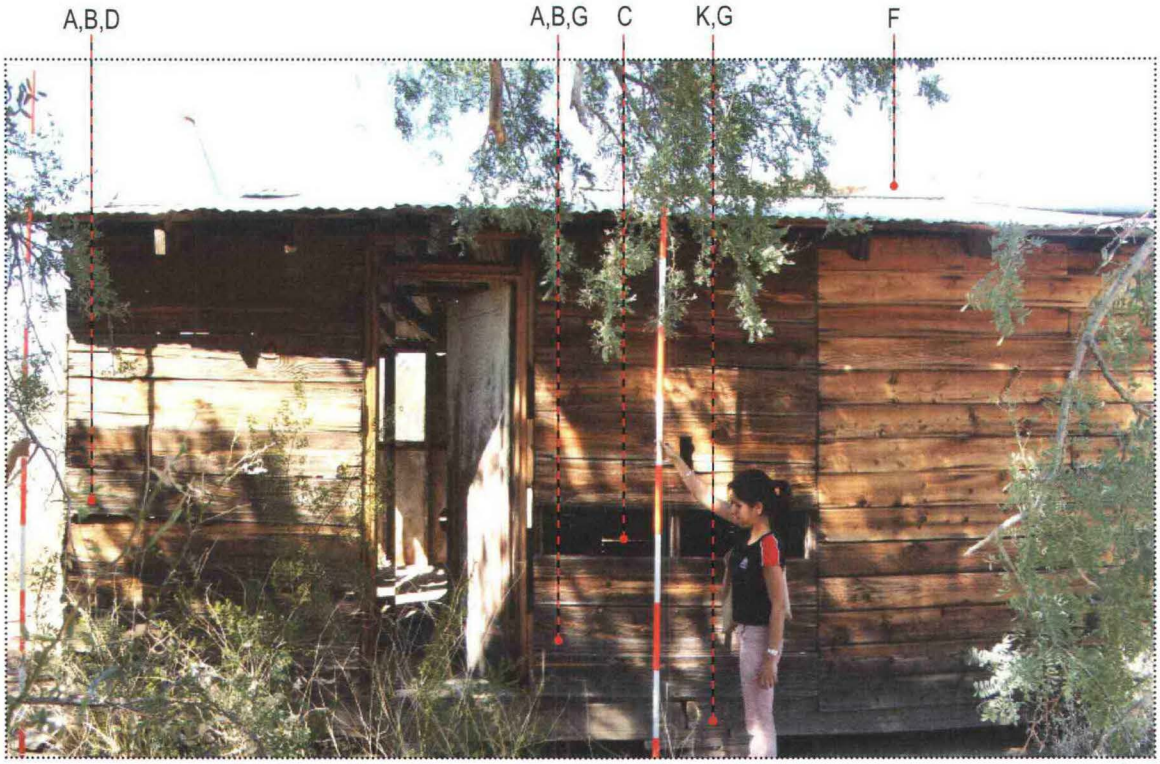
The Hay Barn has a gable roof supported by a series of ten trusses spanning in the N-S direction. The trusses support 2 x 4 purlins running in the E-W direction. The roof is clad with corrugated sheet metal which appears relatively new. There is a conical sheet metal aperture in the northwest corner. The interior of the Hay Barn displays wooden plank flooring and the walls display remnants of gypsum board panelling.

Condition Assessment

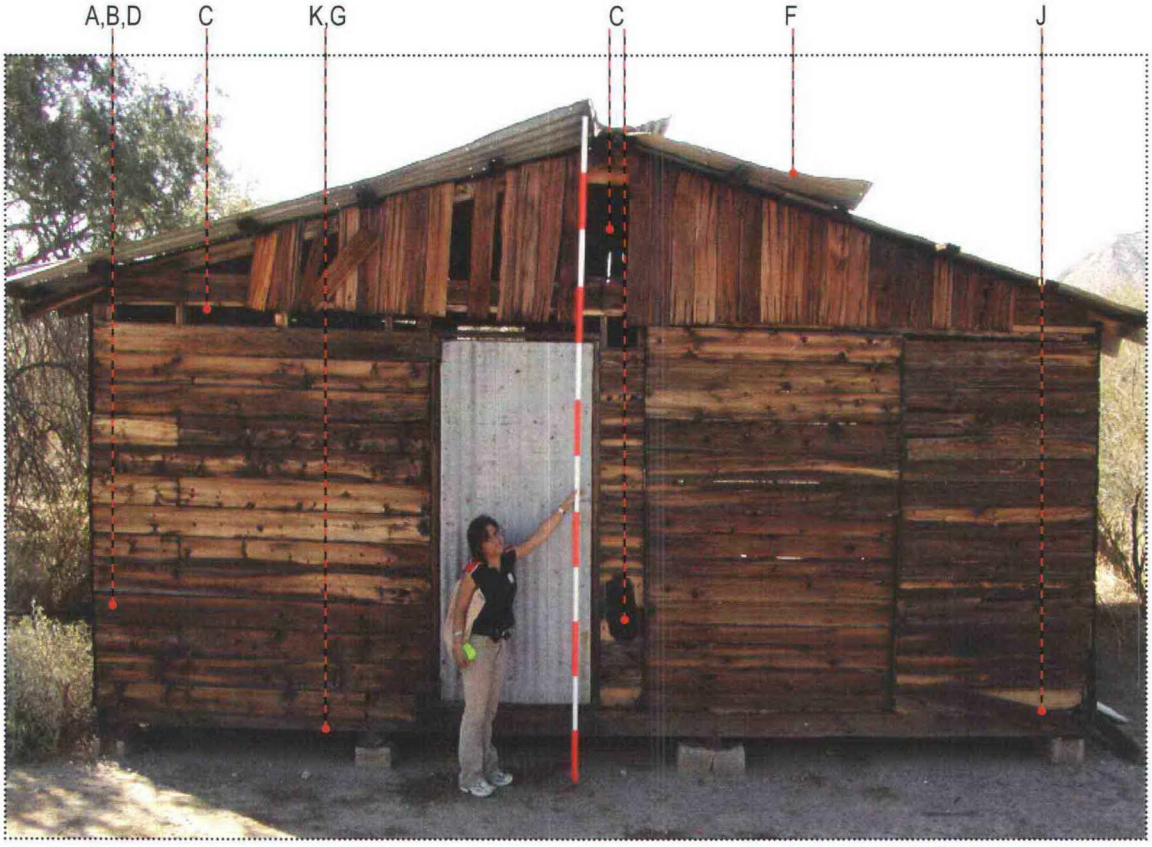
At present, the condition of the Hay Barn has been assessed as fair relative to the condition of the other ranch structures on site. However, there are many pressing problems which must be addressed. Similar to the Bunkhouse, the Hay Barn is raised off the ground. In this case, concrete blocks have been used for this purpose. The floor of the Hay barn is sagging, leading to structural instability. Another pressing problem is the extensive weathering damage that has occurred to the horizontal plank siding. Planks are missing in many places leading to instability and water infiltration. The corrugated sheet metal roof is riddled with holes, suffers rust damage and is detaching in several places.

General Recommendations for Treatment

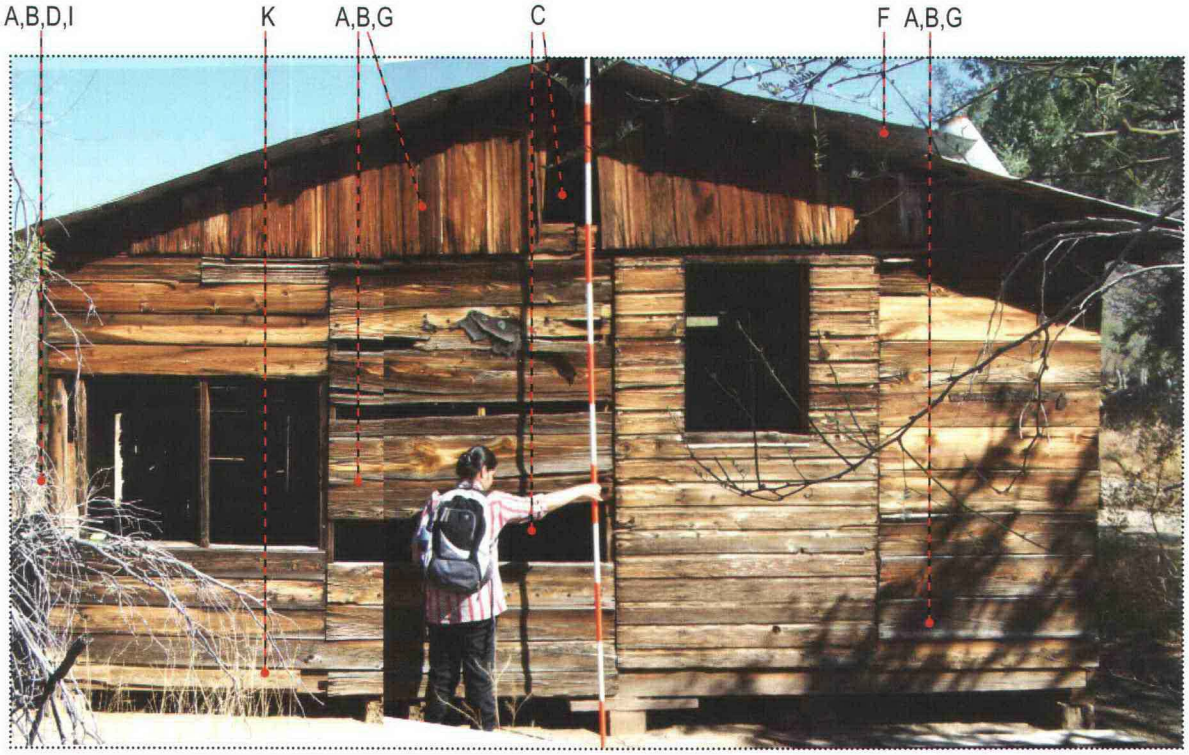
The recommended treatment for the Hay Barn / Bunkhouse No. 2 is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



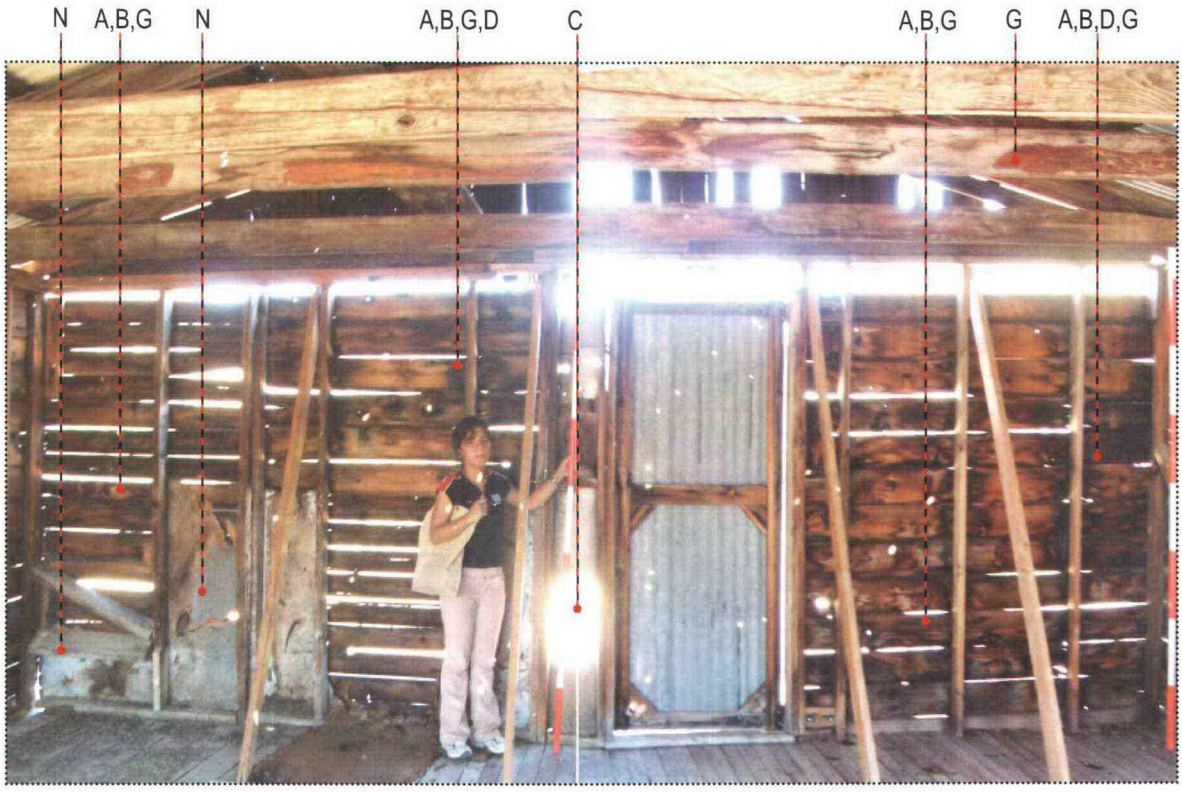
West elevation of the Hay Barn (Letters refer to notes in condition assessment table below)



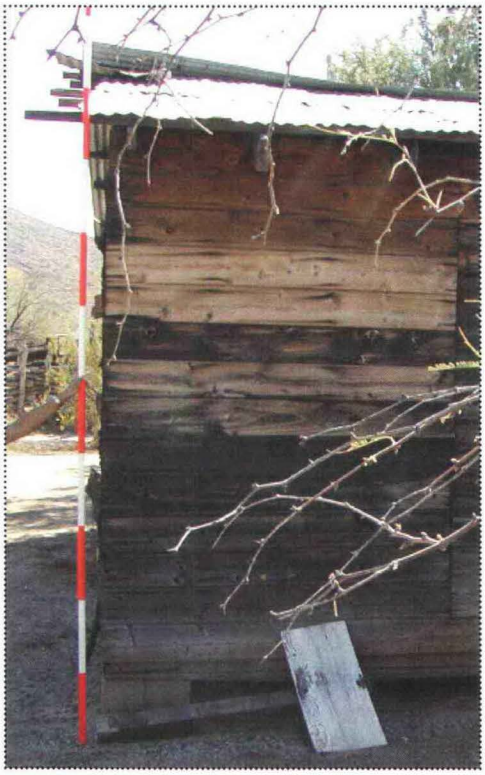
South elevation of the Hay Barn (Letters refer to notes in condition assessment table below)



North elevation of the Hay Barn (Letters refer to notes in condition assessment table below)



Interior elevation of South wall of the Hay Barn (Letters refer to notes in condition assessment table below)



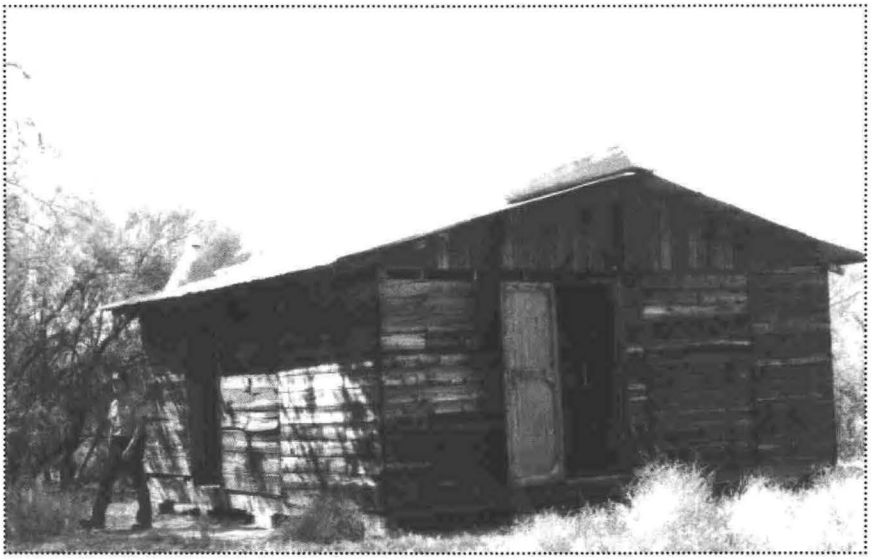
J. Detail view of north facade. Note the plank that is falling apart off near the base of the structure



E. Detail view of metal roofing from the interior. Notice the rusting of sheets.



Fresnals, used for dredging water catchments, found inside the Hay Barn.



Hay Barn south facade, April 1989, Organ Pipe Cactus NM Photo Archive No. 3782

	Deficiencies	Recommended Treatments	Priority
A	Water damage to wood paneling and facia including warping and splintering.	Correction of the source of water Replace the wooden planks where severely damaged; match the size & type of wood to existing.	Serious
B	Rotting of wood due to microorganisms/ pests (also termite) infestation.	Application of biocides where severe damage.	Serious
C	Missing parts from wood planks	Replace entire plank where substantial parts missing or structural stability is endangered.	Critical
D	Corrosion and deterioration of wood around iron nails on edges.	Apply anti-rust coating on nails before replacement planks are installed.	Serious
E	Rusting of the corrugated metal roof due to water damage	Replace the sheets which are severely rusted.	Serious
F	Falling apart of the metal sheets on the roof	Replace/reattach the portions that are coming apart. Use identical sheeting for replacement	Critical
G	Staining of wood due to water damage.	Correction of the source of water; pay attention to roof leaks & holes in wall panels.	Serious
I	Tilting of the structural wooden posts leading to de-stability & bending of the shed sideways.	Stabilise the structure by realigning the main structural posts. If necessary reassess the condition of the tie-beam and strengthen it to bind the structure	Critical
J	Falling apart of the wooden planks near the base of the structure.	These pieces should be nailed back to the structure.	Critical
K	Sagging of the floor.	The cause of the problem should be addressed , for e.g. the whole floor should be repaired.	Critical
N	Missing pieces from the Gypsum board paneling & false ceiling in the interior	The paneling should be replaced if too severely damaged	Serious

Blacksmith Shop

SHPO Structure #: HS01C

UTM: Zone 12 316046E 3560779N

Significance: Medium

Condition: Very Poor

Priority: Critical

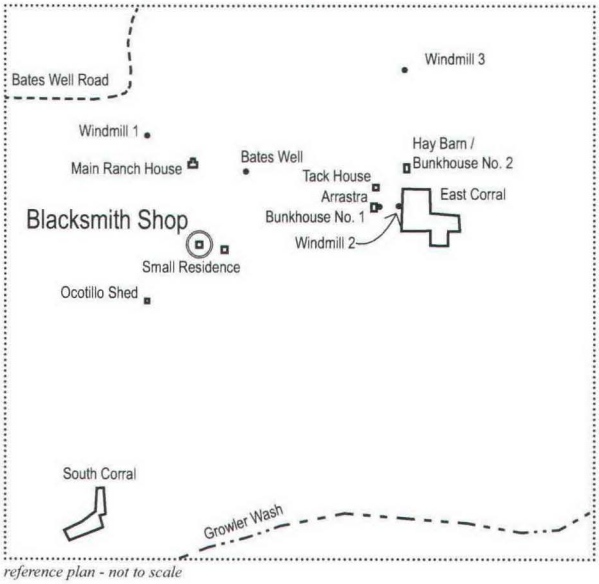
Character Defining Features: Cedar shake roofing, Ramada, salvaged wood plank sheathing



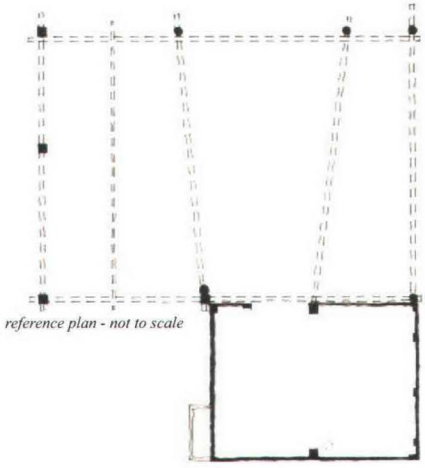
The Blacksmith Shop is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. Blacksmithing work was traditionally associated with making tools for working on the ranch and played an integral part in the day to day operations of many ranches throughout southern Arizona. According to the National Register of Historic Places nomination form the Blacksmith Shop was constructed sometime prior to 1935. However, that date is apparently when Henry Gray became the owner of the property and may not in fact be the year the Shop was built. It is believed, based upon narrations by Henry, that the Blacksmith Shop was built at some point during the period of significance.

Physical Description

The Blacksmith Shop is located approximately 30 feet to the northwest of the Small Residence and more or less in the center of the collection of structures that comprise the Baits Well Ranch site. The Blacksmith Shop



reference plan - not to scale



reference plan - not to scale

Blacksmith Shop and ramada plan

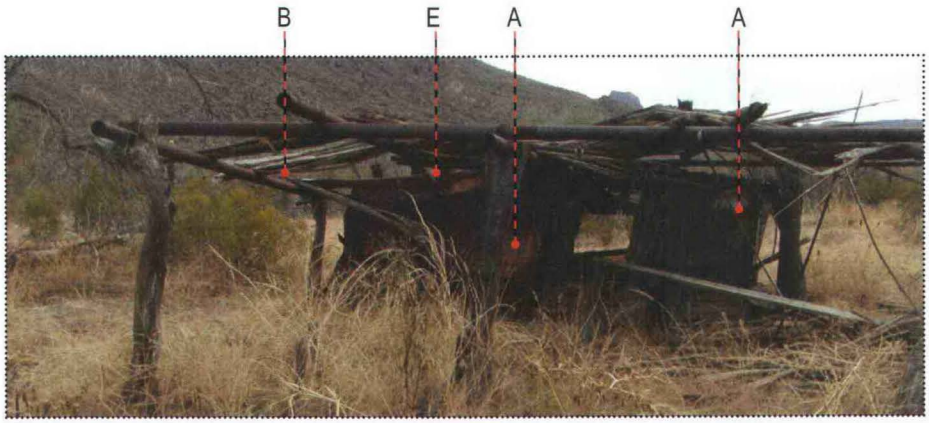
and its accompanying ramada, perhaps better than any other building at Bates Well Ranch, expresses the creativity and resourcefulness necessary to maintain a ranching way of life in extreme isolation. Materials are either taken directly from the surrounding landscape or salvaged from nearby sites such as the Growler Mine, any of the other Gray ranching properties within the monument, or perhaps from the mine in Ajo were Ralph and Bobby were employed. The blacksmith shop is constructed of salvaged milled lumber, cedar shake roofing, and corrugated metal sheets. The use of cedar shakes in the roofing is interesting as this is its only occurrence throughout the Bates Well Ranch site. The ramada is constructed from mesquite trunks, saguaro ribs, railroad ties, old sections of steel pipe and other miscellaneous materials. Many of the materials possess extraneous nails and nail holes inconsistent with their present use. The height of the Blacksmith Shop and accompanying ramada is also a point of interest. It is believed that the height of the buildings is set by the height of the railroad ties that were used as structural members for its construction; ballast 3 feet into the ground with 5 feet remaining. There is one door opening into the building on the north side and a window on the south side. The floor is dirt and two wood benches are present-one in the building and one under the ramada.

Condition Assessment

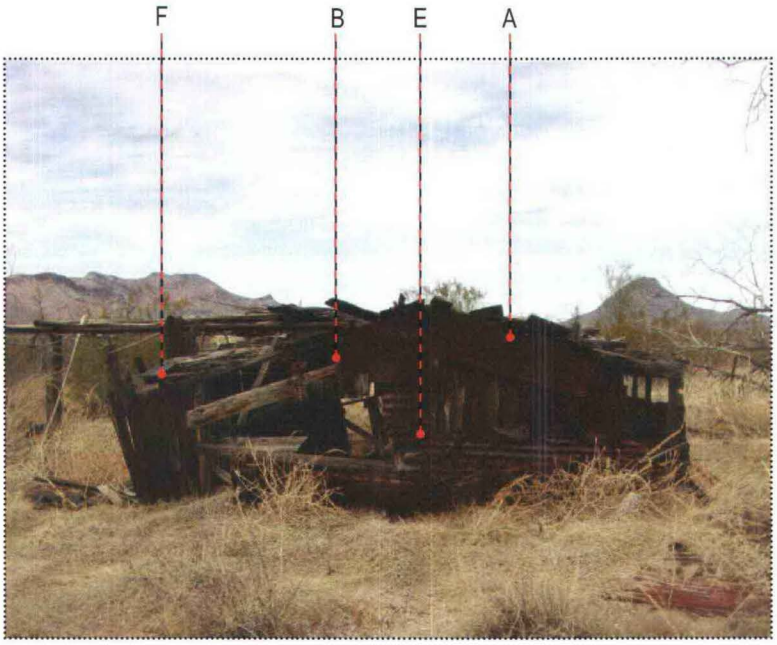
The building was in poor condition in 1986 when the National Register of Historic Places nomination was completed and appears to be near collapse in photos in 2005. There is fire damage on the interior of the east wall.

General Recommendations for Treatment

The recommended treatment for the Blacksmith Shop is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



North elevation of Blacksmith Shop. (letters refer to notes in condition assessment table below)



South elevation of Blacksmith Shop (letters refer to notes in condition assessment table below)



West elevation of Blacksmith Shop (letters refer to notes in condition assessment table below)



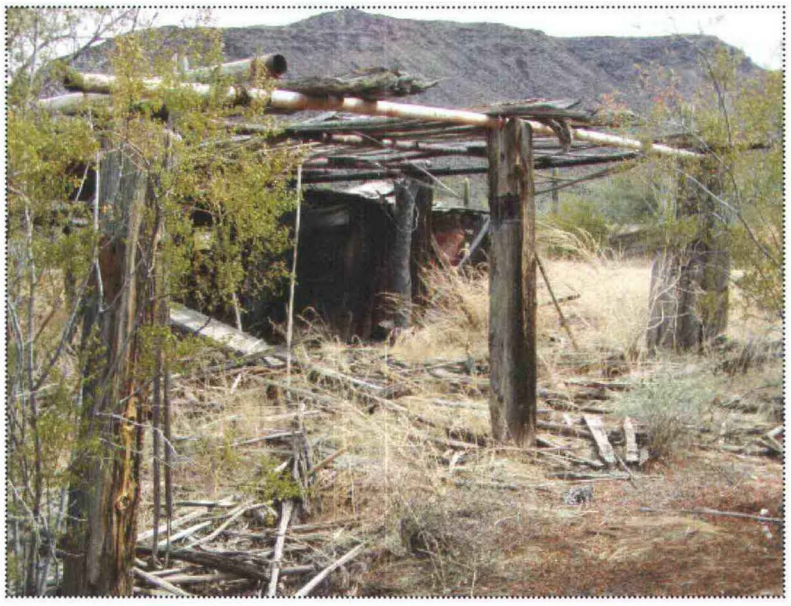
East elevation of Blacksmith Shop (letters refer to notes in condition assessment table below)



North elevation of the Ramada with Blacksmith Shop behind. The structure of the ramada consists of mesquite logs and railroad ties supporting steel piping with a combination of milled lumber, saguaro ribs and steel piping providing the cladding.



South elevation of the Ramada with Blacksmith Shop to the right.



West elevation of the Ramada with Blacksmith Shop behind.



East elevation of the ramada with Blacksmith Shop to the left.



Blacksmith Shop (left) and Small Residence (right), date unknown. Organ Pipe Cactus NM Photo Archive No. 620

	Deficiencies	Recommended Treatments	Priority
A	Corrugated metel contains severe rust damage.	Replace roof with like material	Serious
B	Rotted/termite infested Wood	Application of biocides where damage is severe.	Critical
C	Missing Components	Replace lost components	Serious
D	Water Damage	Replace roof and repair or replace damaged material.	Serious
E	Broken Window Framing/glazing	Replace and repair as needed	Serious
F	Structural Failure	Repair structural damage	Critical

Ocotillo Shed

SHPO Structure #: HS01G

UTM: Zone 12 316006E 3560754N

Significance: High

Condition: Poor

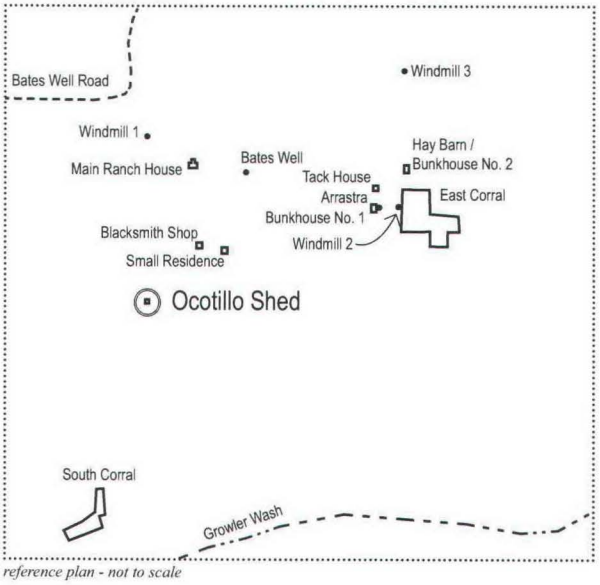
Priority: Critical



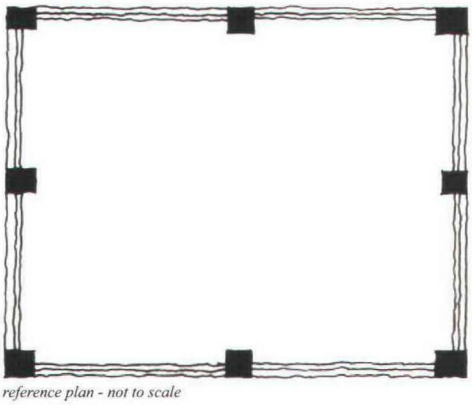
The Ocotillo Shed is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. The Ocotillo Shed was constructed within this period, most likely prior to 1935, and formed a necessary auxiliary building to support the ranching activities at Bates Well. Similar structures have been more generically referred to as *jacals* in the southwest, which means a hut with a thatched roof and walls made of upright poles or sticks covered and chinked with mud or clay. Although not completely appropriate, this description loosely fits the Ocotillo Shed. There has been some reference to this structure as the "chicken house."

Physical Description

The Ocotillo shed is a small building made out of saguaro ribs and ocotillo stems. The primary structure is made up of eight railroad ties fixed vertically to serve as columns or posts. The building is primarily clad with



reference plan - not to scale



reference plan - not to scale

Ocotillo Shed plan

saguaro ribs and ocotillo branches held together by barbed wire. In addition salvage sheet metal (including advertising boards), plywood and chicken wire complete the cladding

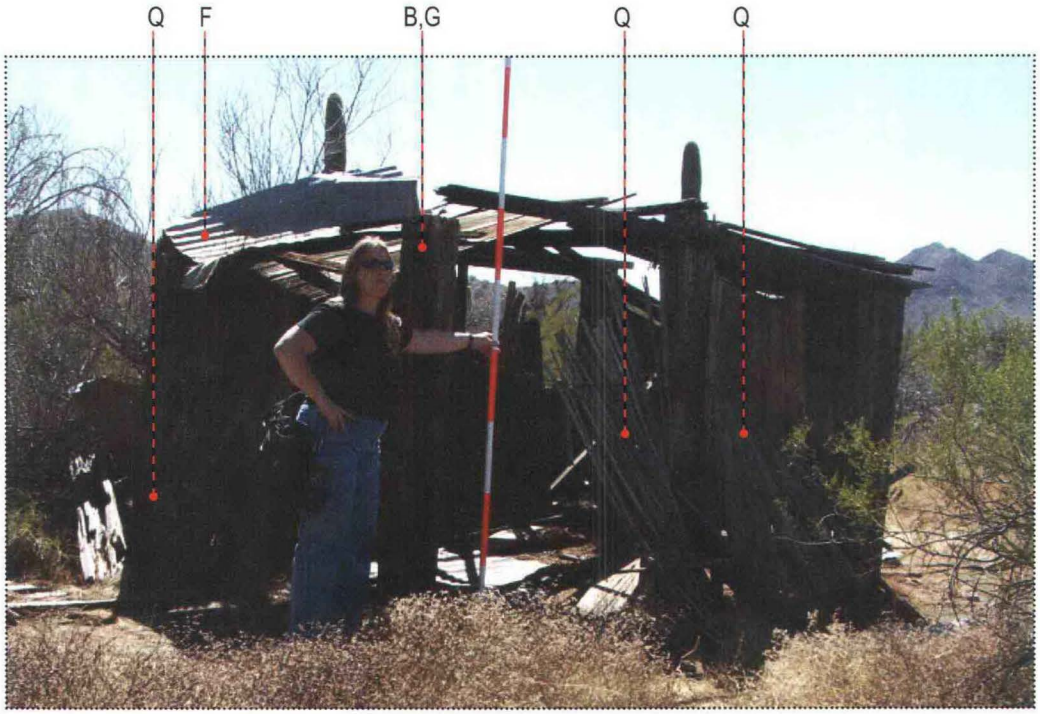
The structure has a very low gable roof made up of wooden rafters and covered with plywood & wood planks. There are some remnants lying next to the structure of what appears to have been a wooden entrance door. In terms of usage, It is not very clear what specific function this building was put to by the ranchers.

Condition Assessment

At present, the condition of the Ocotillo Shed has been assessed as poor relative to the other ranch structures on site. This is primarily because of the severe structural damage that it has suffered. The walls are all falling apart with detached pieces lying around the building. The causes for this are the deterioration of the saguaro ribs as well as the failure of the barbed wire that was holding them together. The sheet metal that formed portions of the wall are all detaching. The roof of the structure is in very bad shape and the sheathing material is almost entirely absent.

General Recommendations for Treatment

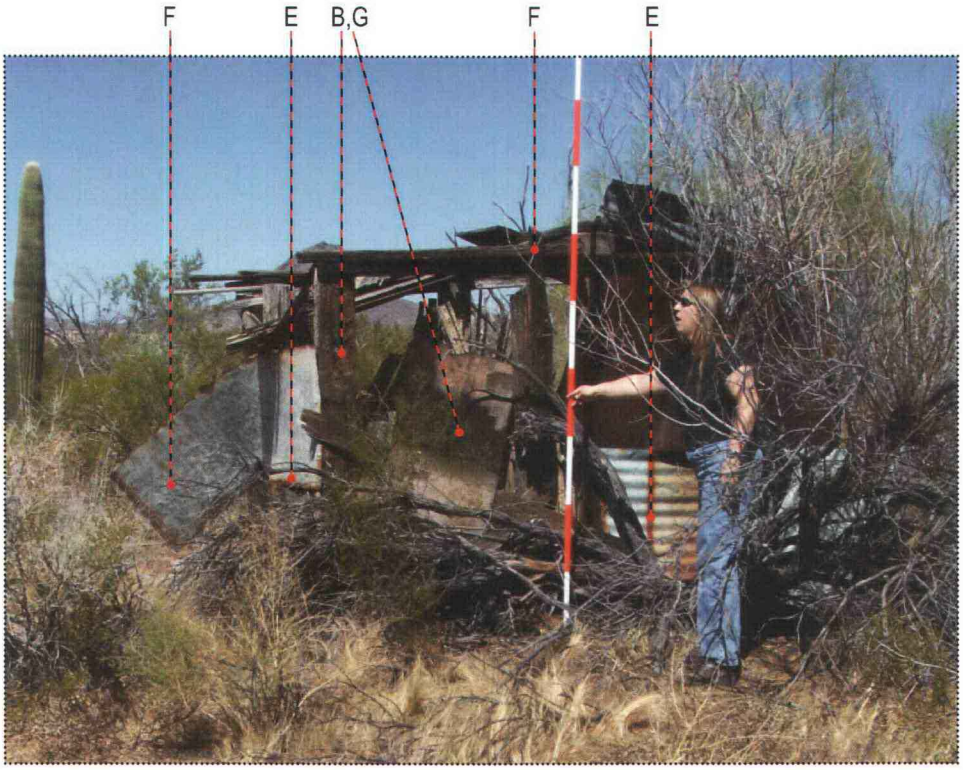
The recommended treatment for the Ocotillo Shed is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



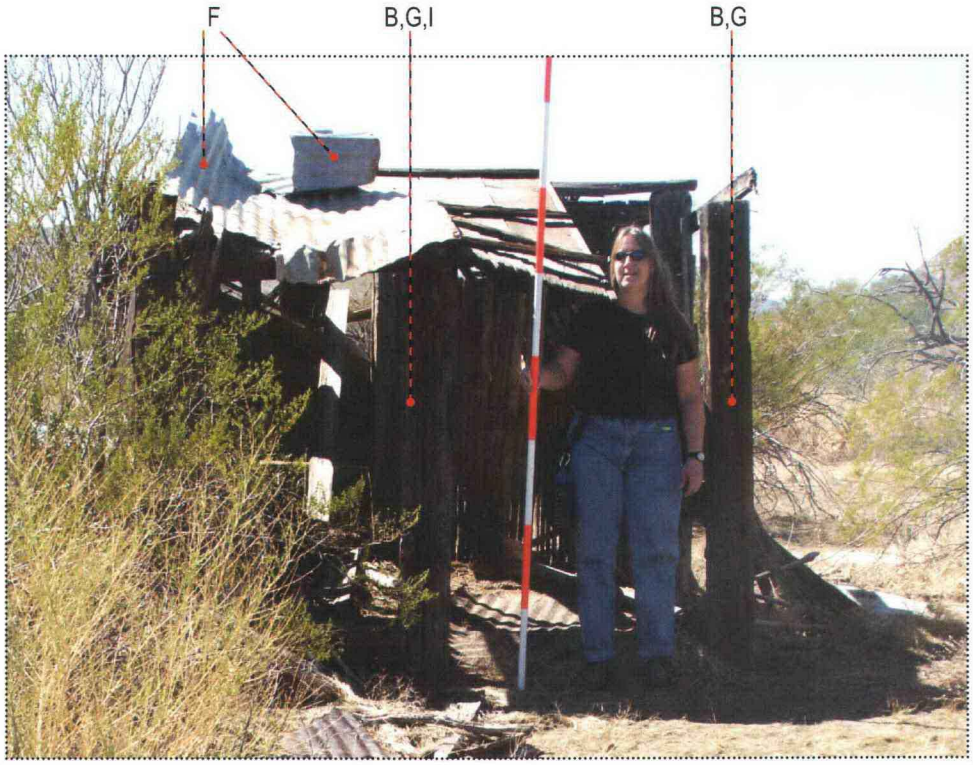
North elevation of the Ocotillo Shed (Letters refer to notes in condition assessment table ahead)



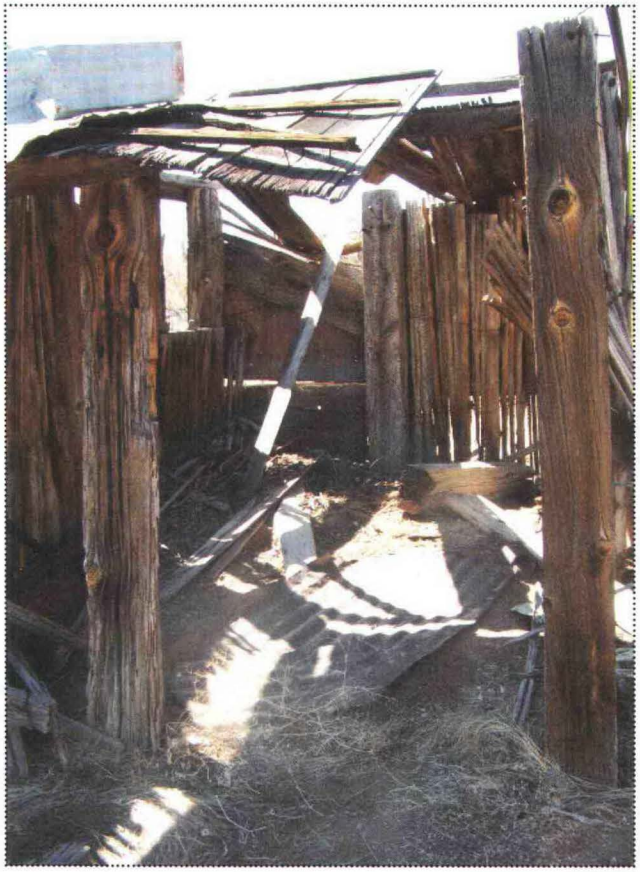
West elevation of the Ocotillo Shed (Letters refer to notes in condition assessment table ahead)



South elevation of the Ocotillo Shed (Letters refer to notes in condition assessment table ahead)



East elevation of the Ocotillo Shed (Letters refer to notes in condition assessment table ahead)



Interior of the Ocotillo Shed



Saguaro ribs tied with barbed wire that clad the Ocotillo Shed.



The failure of the saguaro rib cladding



Parts of the structure lying scattered around on the site



Ocotillo Shed, referred to as Jacal *by HABS, April 1972. HABS No. AZ-155-B*

	Deficiencies	Recommended Treatments	Priority
B	Rotting of wood due to microorganisms/ pests (also termite) infestation.	Application of biocides where severe damage.	Serious
C	Missing parts from wood planks	Replace entire plank where substantial parts missing or structural stability is endangered.	Critical
D	Corrosion and deterioration of wood around iron nails on edges.	Apply anti-rust coating on nails before replacement planks are installed.	Serious
E	Rusting of the corrugated metal roof due to water damage	Replace the sheets which are severely rusted.	Serious
F	Falling apart of the metal sheets on the roof and walls	Replace/reattach the portions that are coming apart. Use identical sheeting for replacement	Critical
G	Staining of wood due to water damage.	Correction of the source of water; pay attention to roof leaks & holes in wall panels.	Serious
I	Tilting of the structural wooden posts leading to de-stability & bending of the shed sideways.	Stabilise the structure by realigning the main structural posts. If necessary reassess the condition of the tie-beam and strengthen it to bind the structure	Critical
Q	The tilting of rib - walls	Replace the saguaro/ ocotillo ribs that are missing or damaged and reattach them using barbed wire, then prop up the wall again	Critical

Small Residence

SHPO Structure #: HS01B

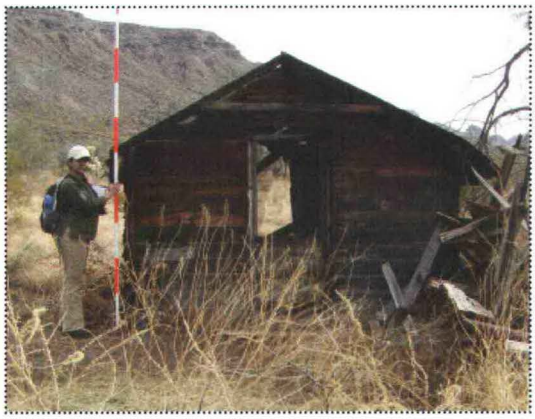
UTM: None on record

Significance: Medium

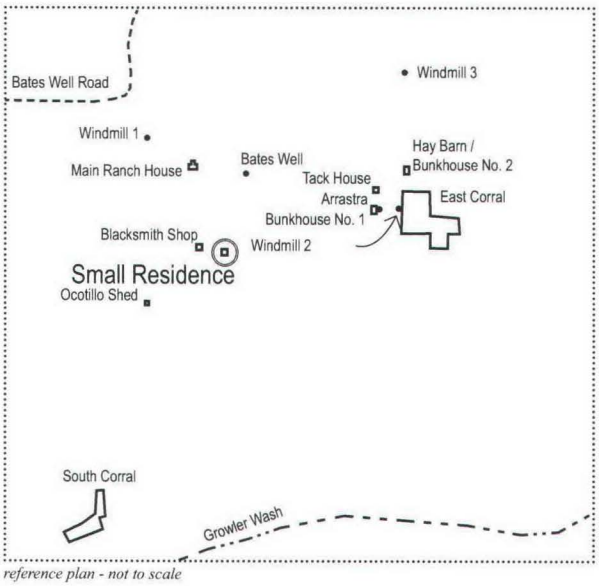
Condition: Very Poor

Priority: Critical

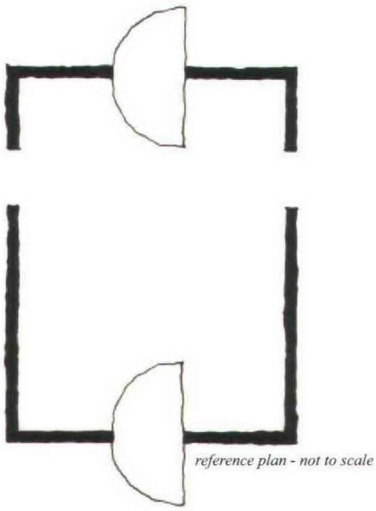
Character Defining Features: Salvaged wood planks, Sliding windows for glazing or screen, ¼" and ½" plywood and other wood sheathing for interior finish of walls



The Small Residence is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. According to the National Register of Historic Places nomination form the Small Residence was constructed in 1935. However, that date is apparently when Henry Gray became the owner of the property and may not in fact be the year the house was built. It is believed, based upon narrations by Henry, that the Small Residence was built at some point during the period of significance. The Main Ranch House was not brought to the site until 1942, so it is possible that this was the principle residence until that time. For many years the residence was occupied by a Native American ranch hand named Chico Gomez. It is believed that the current name being used: the Small Residence, has been confused from the name Chico Residence, chico meaning small in Spanish.



reference plan - not to scale



reference plan - not to scale

Small Residence plan

Physical Description

While the Small Residence may indeed seem small by today's standards, it should be noted, as evidenced by the 1972 HABS photos included later in this section, that the Small Residence once featured an adjacent ramada. It is evident from the HABS photos that the area beneath the ramada served as living space for the building's occupant. It is also likely no accident that the building was built near a shade giving salt cedar. Indoor/outdoor living, especially in the region's brutal summers, was an essential way of life for ranchers from this period.

The Small Residence is Located 30 feet to the east of the Blacksmith Shop and about 500 feet to the west of the bulk of the structures that comprise the Bates Well Ranch. The Small Residence is a simple rectangular structure of 132 square feet with a single pitched roof. The walls and the floor are constructed of salvaged milled lumber, Constructed of wood planks for the walls and the floor, and a corrugated metal roof. The lack of paint and overall low quality of building materials are an important part of this building's character

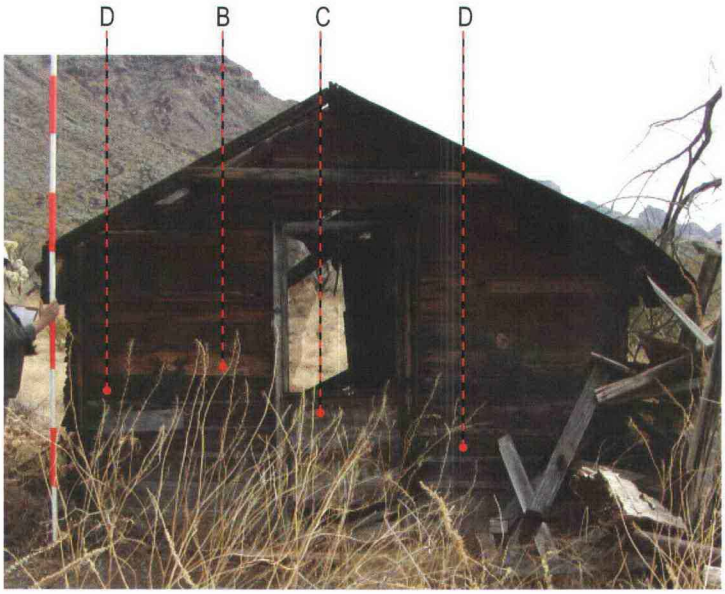
The Small Residence uses wood frame construction and is almost entirely erected from milled lumber, much of which appears to have been salvaged from other structures. The walls and roofing structure consist of 2 x 4s spaced 2' on center. The exterior is sheathed with horizontal 1 x 6 tongue and groove planks with battens added to the seams in some locations. The interior walls are sheathed with ¼" plywood and masonite. The floor is constructed from 1 x 6 wood planks fastened to a substructure composed of 2 x 4s laid directly on the ground. There are two door openings, both located approximately on center at each of the gable ends. Each door opening has a double set of doors, a wood door on the inside which swings into the residence and a screened door which swings out. There are two identical window openings located towards the north end of the east and west facades. The unique windows allow for the a glazed pane with 4 lites and wood mullions to be slid horizontally over a screened opening or pulled back to allow for air circulation.

Condition Assessment

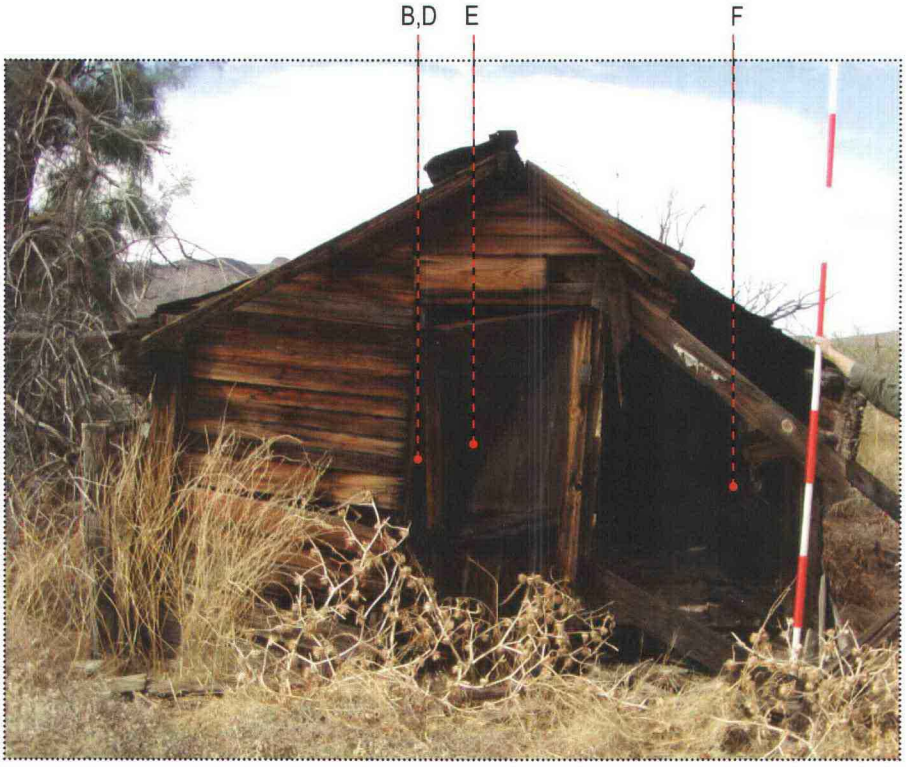
The building was in poor condition in 1986 when the National Register of Historic Places nomination was completed and has continued to deteriorate. The southeast corner of the building has failed and the building is leaning in this direction. It is only a matter of time before the balance of the building fails as well.

Recommended Treatment

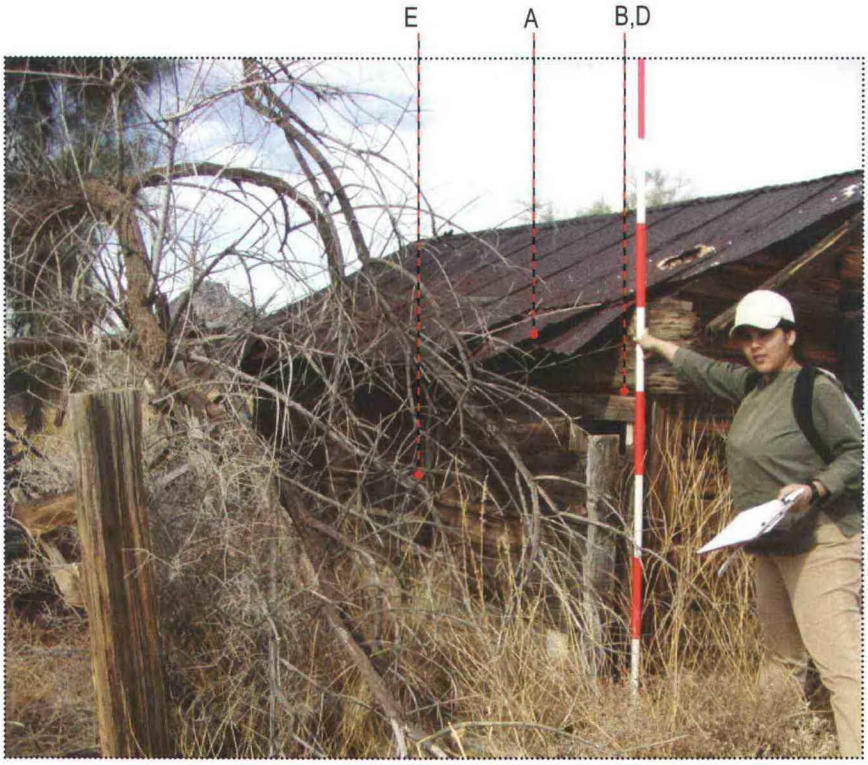
The recommended treatment for the Small Residence is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



North elevation of the Small Residence (letters refer to notes in condition assessment table below)



South elevation of the Small Residence (letters refer to notes in condition assessment table below)



West elevation of the Small Residence (letters refer to notes in condition assessment table below)



East elevation of the Small Residence (letters refer to notes in condition assessment table below)



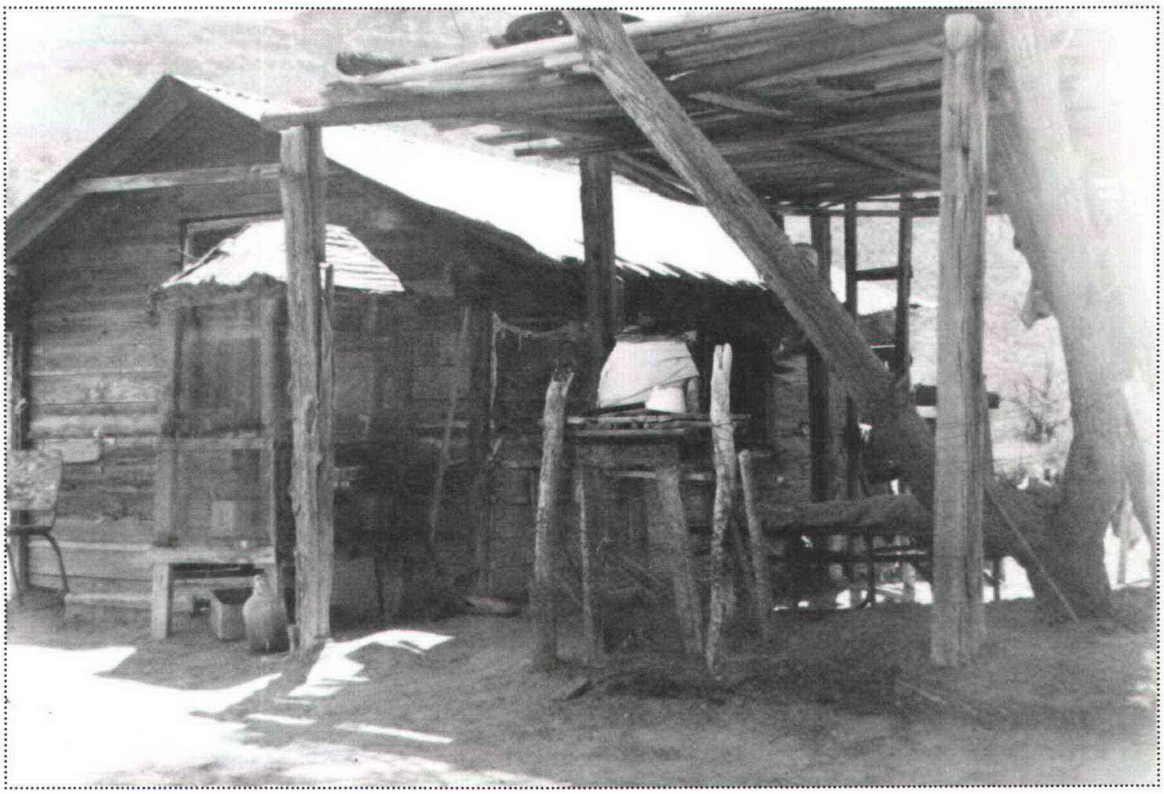
Interior elevation of the Small Residence (letters refer to notes in condition assessment table below)



Interior southeast corner of the Small Residence (letters refer to notes in condition assessment table below)



Small Residence SE corner, April 1972. Habs No. AZ-155-A-1



Small Residence NW corner, April 1972. Habs No. AZ-155-A-2



Blacksmith Shop (left) and Small Residence (right), date unknown. Organ Pipe Cactus NM Photo Archive No. 620

	Deficiencies	Recommended Treatments	Priority
A	Corrugated metel roof contains severe rust damage.	Replace roof with like material	Serious
B	Rotted/termite infested Wood	Application of biocides where severe damage.	Critical
C	Missing Components	Replace lost components with like material	Serious
D	Water Damage	Replace roof and repair or replace damaged material.	Serious
E	Broken Window Framing/glazing	Replace and repair as needed	Serious
F	Structural Failure	Repair structural damage	Critical

Windmill 2 And Water Tank (Historic Bates Well)

SHPO Structure #: HS01N

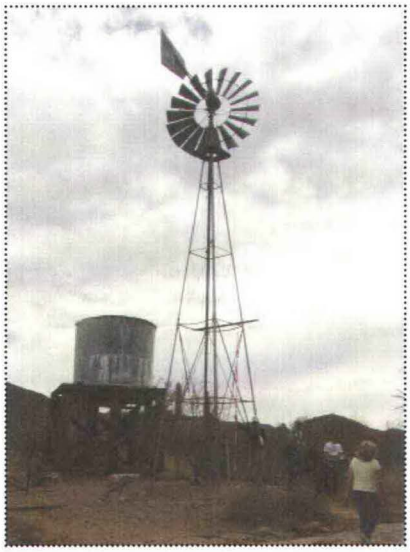
UTM: Zone 12 316251E 3560971N

Significance: High

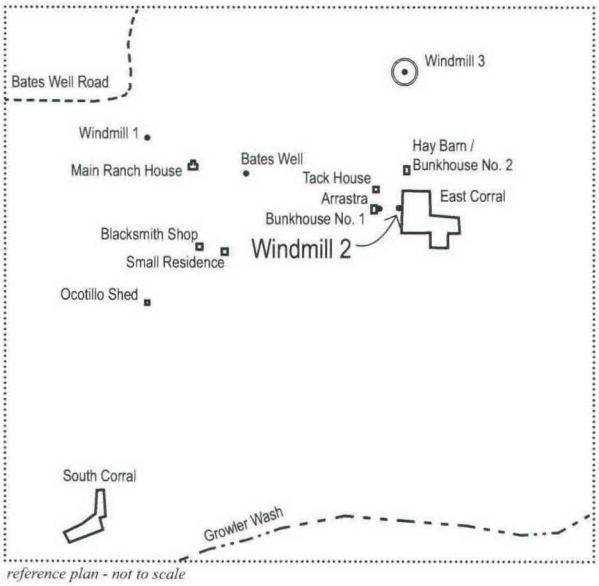
Condition: Fair

Priority: Minor

Character Defining Features: Steel Frame, diagonal bracing, ladder, blades, vane, pump, corrugated metal cylindrical pump casing, sheet metal tank, railroad tie construction in platform.



Windmill 2 and its water tank are one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. Windmill 2 and its water tank were likely constructed within this period and formed a necessary structure to support the ranching activities at Bates Well Ranch. While this well is referred to in the National Register of Historic Places nomination form as Windmill 2, it is actually the hand-dug, historic Bates Well. The well listed as "Bates Well" in the nomination form is actually a well drilled to replace the Daniels Well, which was obliterated in a 1951 flood. (Rutman 2006). W. Bates, a settler and perhaps former confederate soldier, likely dug the original Bates Well in 1886 (Greene, pg. 89). Soon after ownership of the area transferred to Reuben Daniels, however, the original well collapsed. Daniels dug a new well, likely in 1915 with the assistance of a Charles G. Puffer, maintaining the name of Bates for the well.



reference plan - not to scale

Physical Description

Windmill 2 and its water tank are located at the western edge of the East Corral. The windmill is built on a stone foundation, with cattle brands etched in the stones. The windmill itself is a metal A frame windmill, with a 7' square base. It is constructed of 2-1/2" x 2-1/2" x 1/8" galvanized steel angles on corners, with 1-1/4" x 1-1/4" galvanized steel angle horizontal members. It also has a 1" X 1" galvanized steel angle diagonal bracing. A ladder constructed of 1/2" thick round steel members is integrated onto the south-east corner. The vane has

"MOMSEN-DUNNEGAN-RYAN Co., EL PASO, TEXAS" stencilled on it, indicating the manufacturer of the windmill. The pump at the base of the windmill is encased in a corrugated metal cylinder capped with a steel plate, having pipes connected to the water tank to the south. The adjacent water tank is 6'-6" in diameter and 6' high and sits on a platform 8'-6" wide and 7' tall constructed of railroad ties.

Condition Assessment

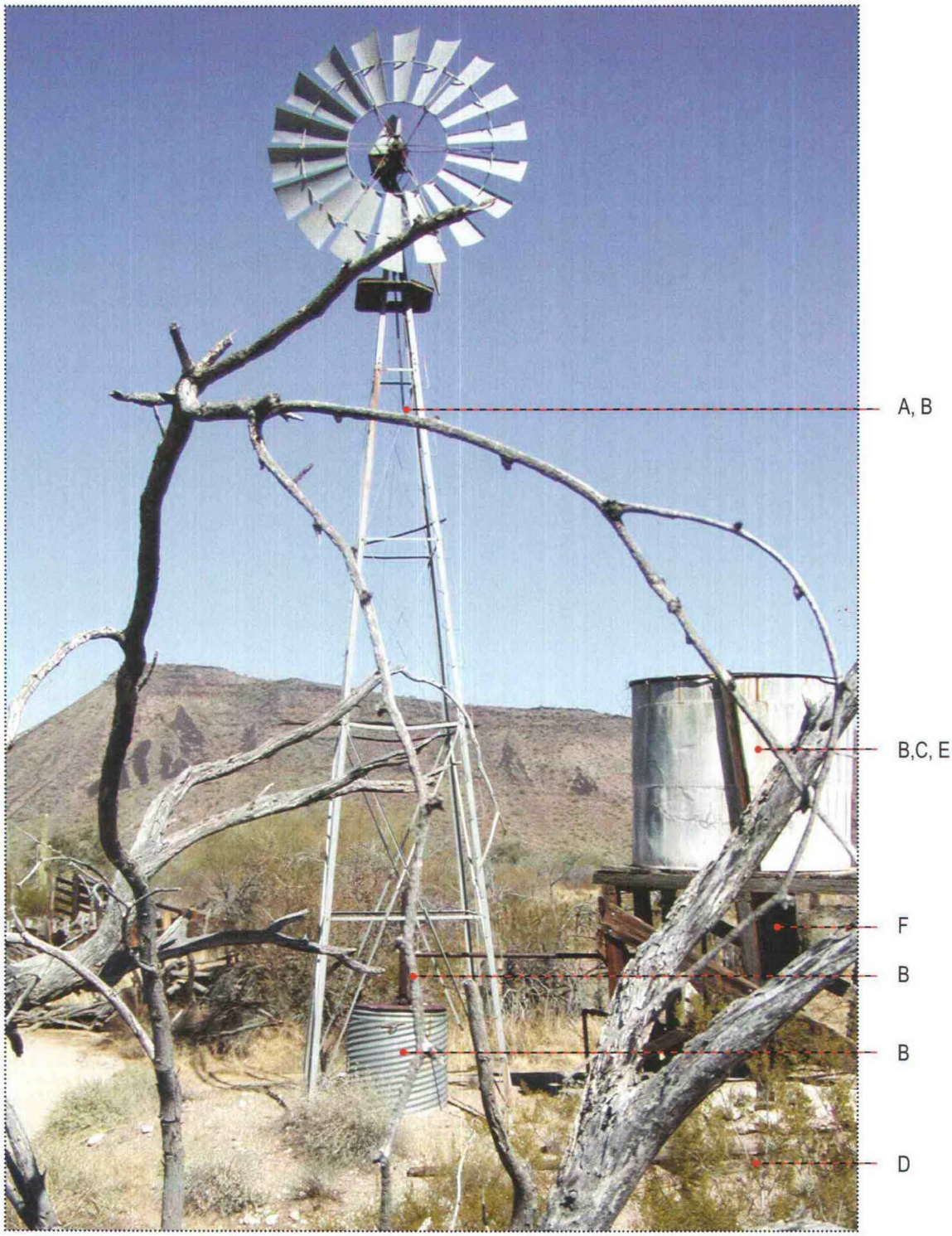
Windmill 2 is in best condition among the three windmills on site, with its blades and vane intact and the capacity for rotation when a breeze is present. Its frame is in good condition, with none of the members missing or badly deteriorated. There is not a significant amount of rust damage. The connection between the rotor and the pump is broken and hence the windmill does not function properly. Both the windmill and the adjacent water tank have suffered deterioration due to weathering. There is some rusting seen in the body of the water tank, as well as in the cylindrical corrugated metal casing for the pump. The platform of the water tank, constructed out of railroad ties, needs stabilization as some of the wooden members, as well as the connections that keep them together are deteriorating. The ladder to the tank platform is missing.

General Recommendations for Treatment

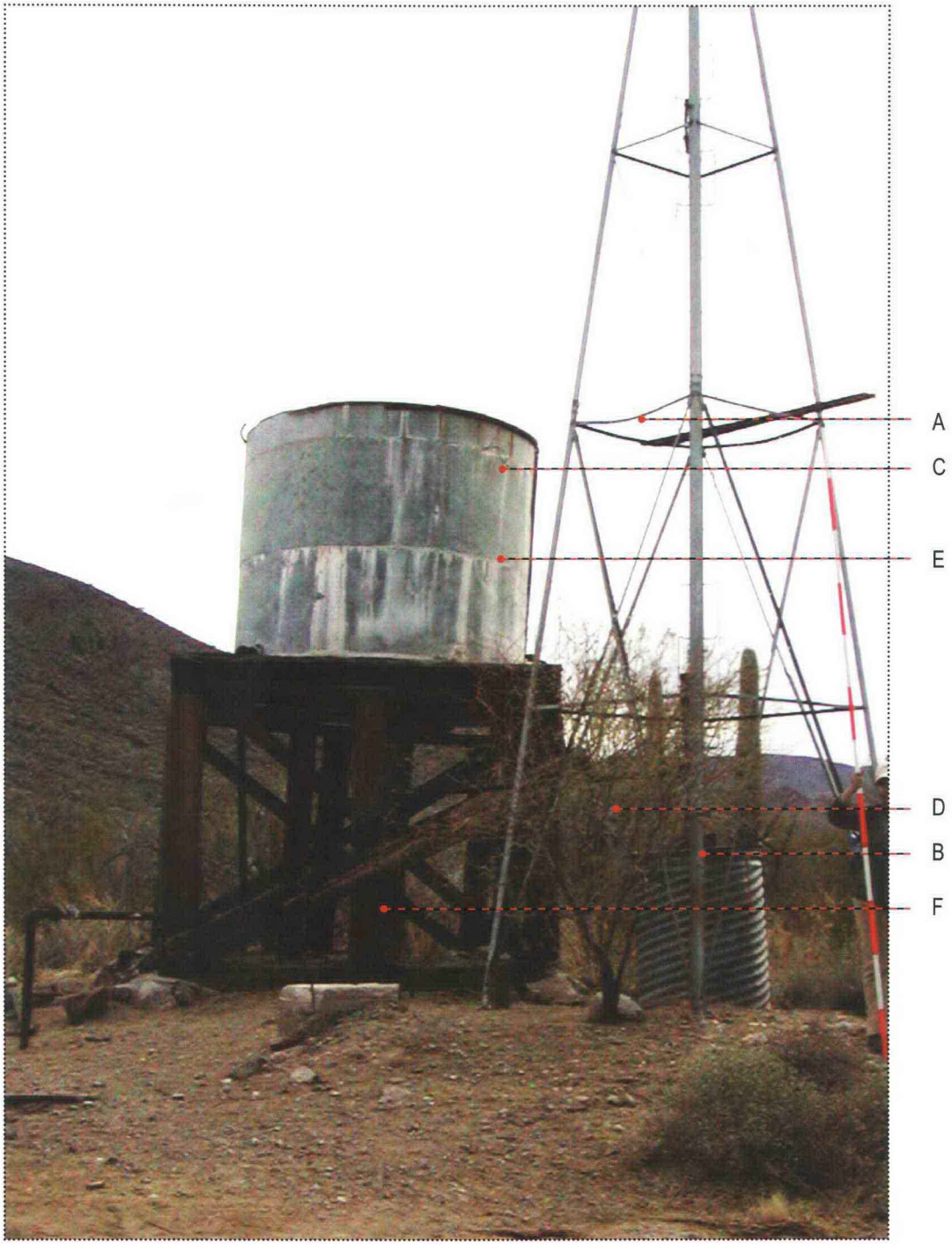
The recommended treatment for Windmill 2 is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



View of Windmill 2 - blades and vane from the north side.



View of Windmill 2 from the west side showing existing damages and deficiencies. (letters refer to notes in condition assessment table below)



Water Tank and Base of Windmill (letters refer to notes in condition assessment table below)



Windmill 2 and water tank, April 1972. HABS no. AZ-155-C

	Deficiencies	Recommended Treatments	Priority
A	Detached, Deformed and/or missing components: Connector between rotor and well pump detached. Horizontal members on windmill A frame bent.	Repair and reattachment of existing members if possible. Replacement of damaged/missing members.	Critical
B	Rusting of metal parts: well cap, pipe	Chemically treat or replace elements whose integrity has been damaged by corrosion	Critical
C	Warping of Water Tank metal sheet	Re-form appropriately and affix in place.	Serious
D	Vegetation overgrowth around Structure	Trim or remove vegetation that obscures visibility	Serious
E	Staining of material due to water	Allow to occur naturally	Low
F	Rotting and Warping of wooden members in water tank platform	Chemically treat or replace members whose integrity has been compromised.	Serious

Windmill 3

SHPO Structure #: HS01O

UTM: Zone 12 316246E 3560842N

Significance: Fair

Condition: Fair

Priority: Minor

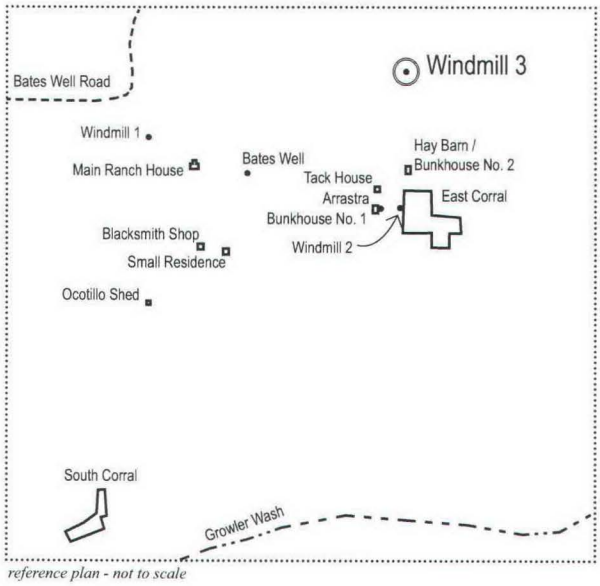
Character Defining Features: Steel Frame, diagonal bracing, ladder, blades, vane.



Windmill 3 is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. However, it would appear that the writer of the nomination may have been confused, as according to NPS personnel (Rutman 2006), Windmill 3 was actually drilled in the 1950s. Regardless of it construction date, Windmill 3 formed a necessary structure to support the ranching activities at Bates Well Ranch.

Physical Description

Windmill 3 is located approximately 450' north of Windmill 2 and is isolated from the rest of the structures associated with the ranch. Windmill 3 is almost identical to Windmill 2 structurally. It is a metal A frame windmill, with a 7' square base. It is constructed of 2-1/2" x 2-1/2" x 1/8" galvanized steel angles at the corners, with 1-1/4" x 1-1/4" galvanized steel angle horizontal members. It also has a 1" x 1" galvanized steel angle diagonal bracing. A ladder constructed of 1/2" diameter round steel members is integrated onto the south-west corner. The vane has "AERMOTOR CHICAGO" (a company which still exists) stencilled on it, indicating the manufacturer of the windmill.



reference plan - not to scale

Condition Assessment

The blades of Windmill 3 have fallen to the ground, and lie near the base of the windmill. They are in a somewhat less damaged state than those of Windmill 1. The connection between the rotor and the pump is broken. The windmill has suffered deterioration due to weathering.

General Recommendations for Treatment

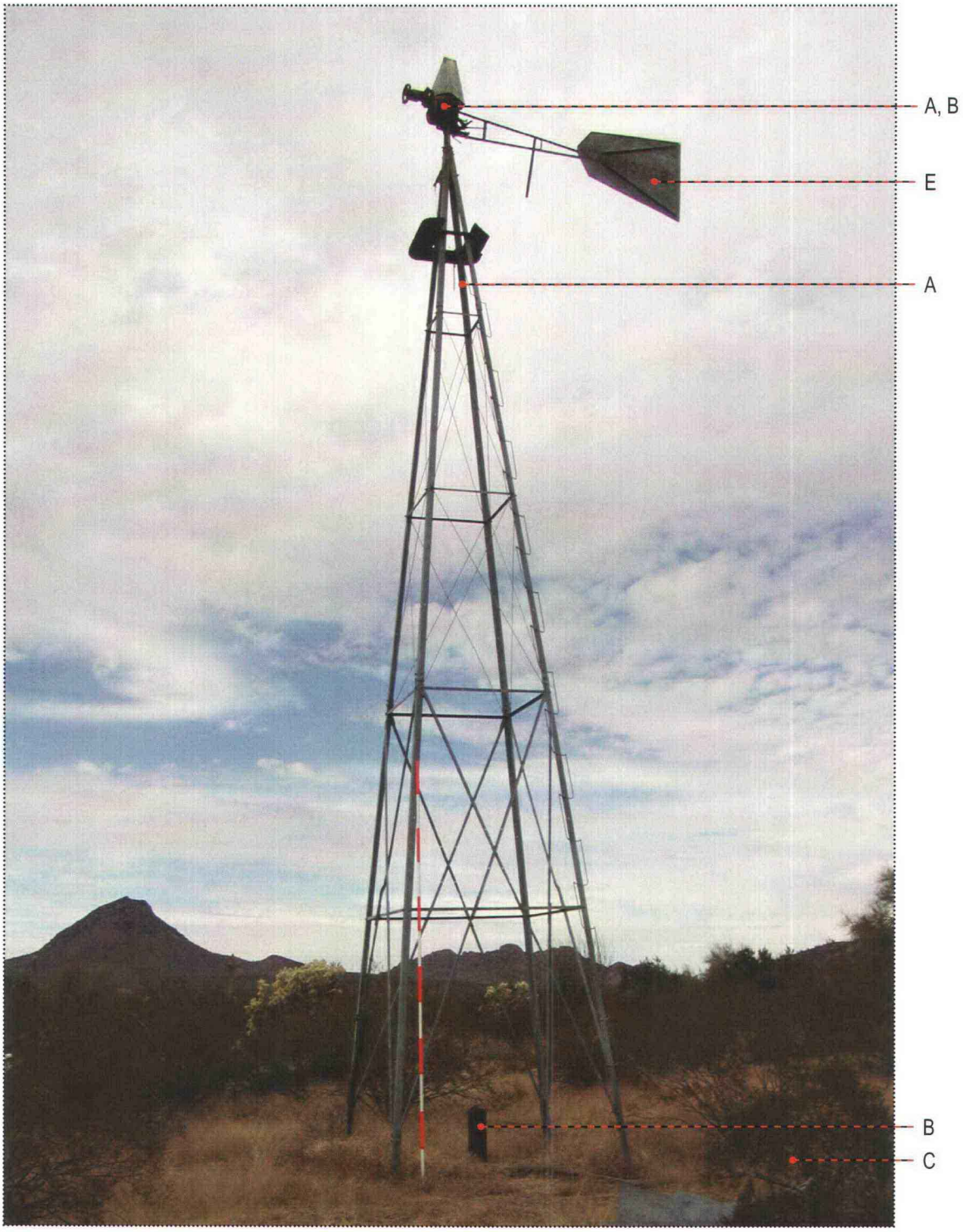
The recommended treatment for Windmill 3 is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



Blades from Windmill 3 lie on the ground near its base. (letters refer to notes in condition assessment table below)



Base of Windmill 3 (letters refer to notes in condition assessment table below)



View of Windmill #3 from the south-west side showing existing damage and deficiencies. (letters refer to notes in condition assessment table below)



View of vane - windmill 3

	Deficiencies	Recommended Treatments	Priority
A	Detached, Deformed and/or missing components: Blades detached, lying on ground nearby. Connector between rotor and well pump detached.	Repair and reattachment of existing members if possible. Replacement of damaged/missing members.	Critical
B	Rusting of metal parts: well cap, windmill vane	Chemically treat or replace elements whose integrity has been damaged by corrosion	Critical
C	Vegetation overgrowth around Structure	Trim or remove vegetation that obscures visibility	Serious
D	Staining of material due to water	Allow to occur naturally	Low

East Corral

SHPO Structure #: HS01K

UTM: Zone 12 316269E 3560862N

Significance: High

Condition: Fair

Priority: Serious

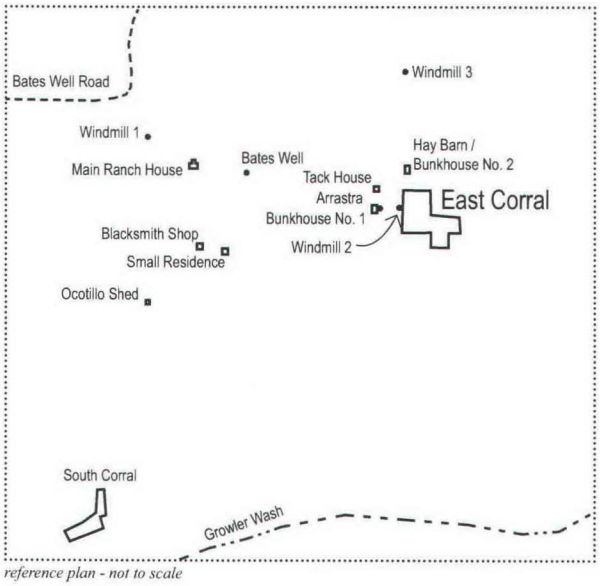
Character Defining Features: Different materials used to construct pens



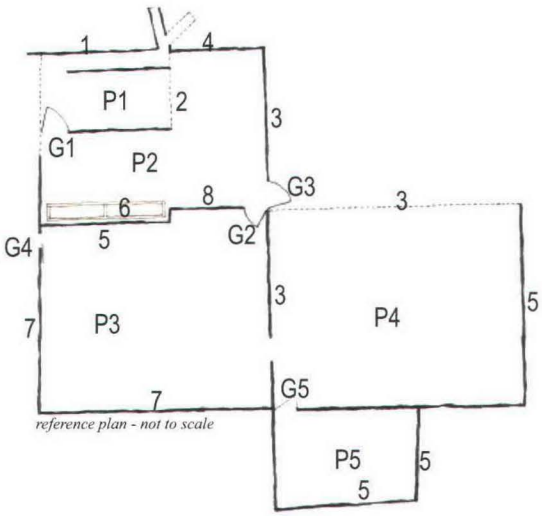
The East Corral is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places, under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. The East Corral was probably constructed within this period and formed a necessary structure to support the ranching activities at Bates Well Ranch.

Physical Description

The East Corral is located approximately 600' ESE of the Main Ranch House and consists of a conglomeration of five pens oriented along a central spine that runs generally north-south. Within the five pens construction and materiality changes frequently, rendering each of the pens a unique entity. Pen 1, P1 in the plan on the following page, is a loading pen constructed mainly of horizontally stacked mesquite logs held in place



reference plan - not to scale



reference plan - not to scale

Plan view of the East Corral. P signifies Pen, *G signifies* Gate *and along with the numbers correspond with the illustrations on the following pages. Dashed lines signify collapsed fencing.*

by regularly spaced vertical mesquite polls, portions of which are in advance stages of collapse. This type of fencing is sometimes referred to as *retaque*, Spanish for: cut in little pieces. As the loading pen, Pen 1 contains a loading ramp differentiated by its composite construction of milled lumber of varying sizes and railroad ties. The loading ramp begins at the eastern corner of Pen 1, extends the length of its northern fence, and ultimately terminates in two cattle chutes, also of milled lumber and railroad ties. Pen 2, P2 in the plan on the following page, conjoins Pen 1 and partially shares its *retaque* construction. However, the southern fence is composed of vertically oriented railroad ties, bound together by barbed wire and a horizontal metal pipe for lateral stability. Pen 2 also contains a partitioned concrete watering trough, with walls approximately 10" thick with the remains of a fence of barbed wire and milled lumber running through the middle.

Pen 3 is a larger holding pen of more widely spaced railroad ties bound with barbed wire and laterally supported by both metal piping and dimensional lumber. Pen 4 likewise uses a vertical orientation of material but with mesquite posts of varying sizes and shapes. The material density also varies greatly in the fourth pen, sometimes being tightly clustered and at others spaced regularly, all the while strung together with barbed wire.

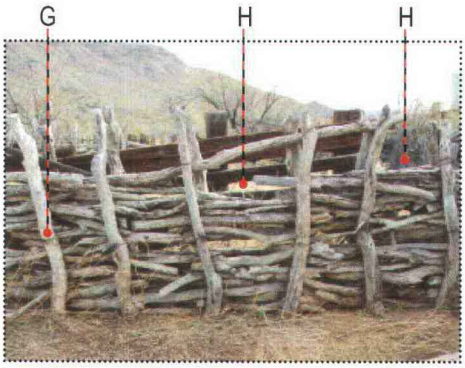
Pen 5 is again of mixed material, vertical mesquite posts and vertical railroad ties. It is the only pen that gives evidence of a shade structure. The ramada-like overhang is located in the southwest corner of the pen and again show signs of mixed materiality. Supported by railroad ties, a combination of metal piping, broken pieces of dimensional lumber, mesquite branches, and corrugated metal sheets are layered together to form a small shelter.

Condition Assessment

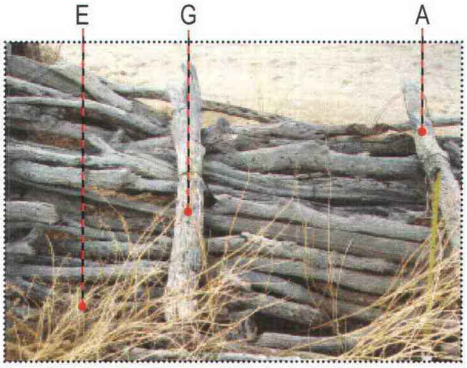
At present, the condition of the structure has been assessed as fair relative to the condition of the other ranch structures on site. This designation, however, does not deny the many structural problems existing in the corral. A number of fences have collapsed completely. The smaller of the cattle chutes has collapsed upon itself and the other is being undermined by water. In all cases the wood elements have suffered from extensive weathering, which has contributed to structural collapse.

General Recommendations for Treatment

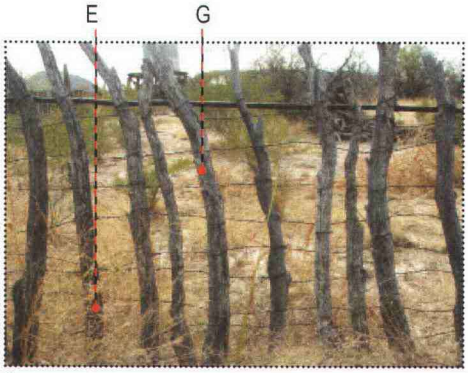
The recommended treatment for the East Corral is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



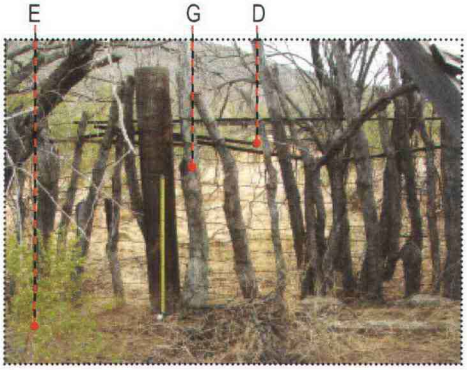
1 *Horizontally stacked mesquite logs & regularly spaced vertical mesquite posts*



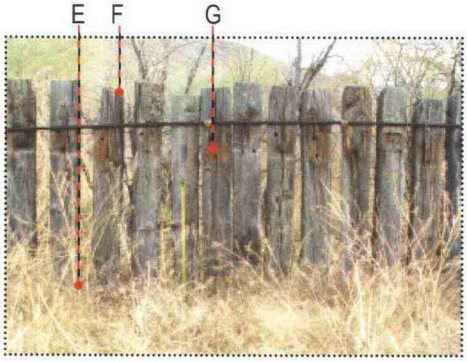
2 *Horizontally stacked mesquite logs & regularly spaced vertical mesquite posts, collapsed*



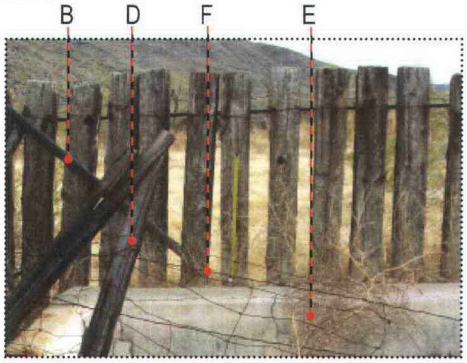
3 *Regularly spaced vertical mesquite posts with barbed wire & metal piping*



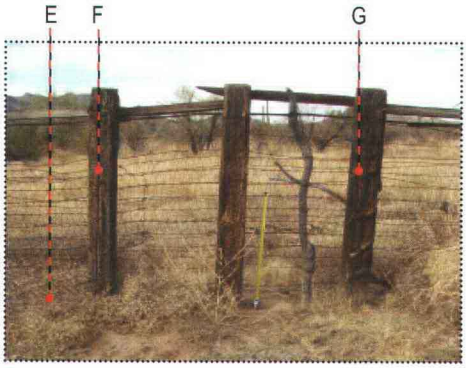
4 *Densely spaced vertical mesquite posts & railroad ties with barbed wire & metal piping*



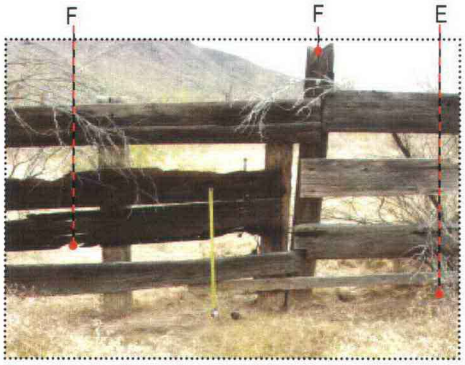
5 *Vertical railroad ties with metal piping & barbed wire*



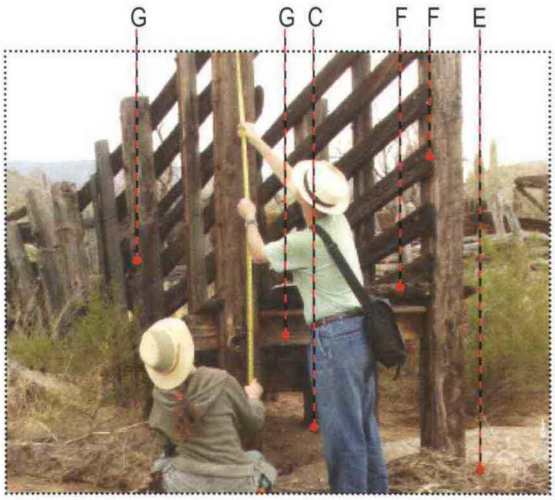
6 *Vertically oriented dimensional lumber and barbed wire*



7 *Vertical railroad ties with metal piping, barber wire, & dimensional lumber*



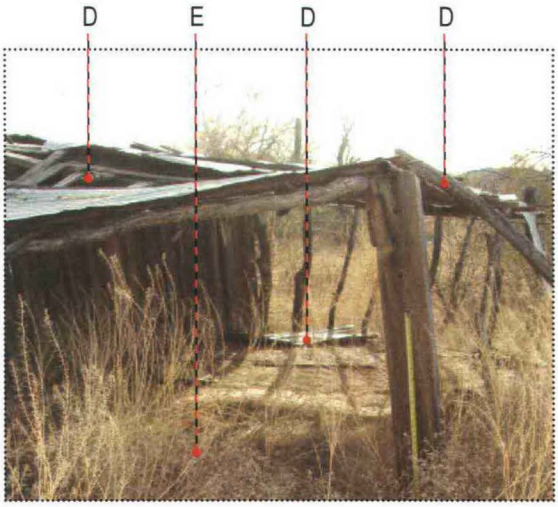
8 *Vertical railroad ties & dimensional lumber*



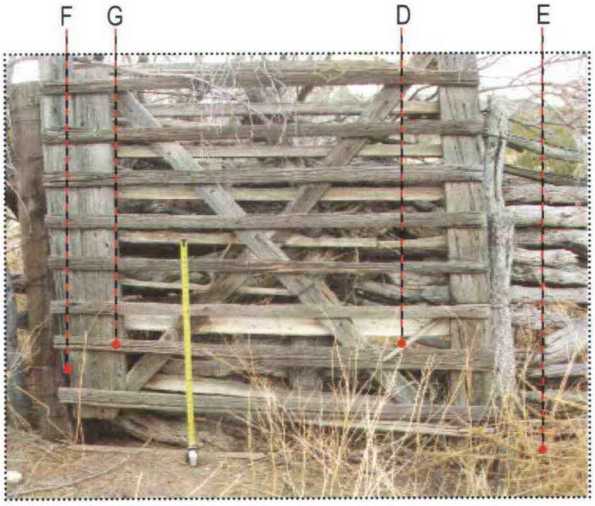
North elevation of the larger cattle chute (letters refer to notes in condition assessment table)



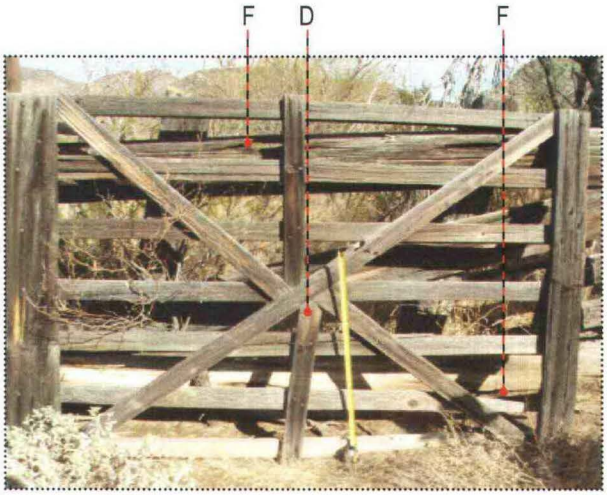
Northeast elevation of the smaller chute (letters refer to notes in condition assessment table)



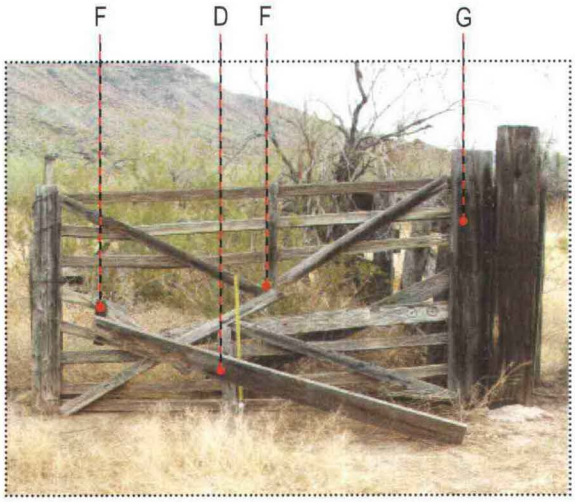
East elevation of the shade structure (letters refer to notes in condition assessment table)



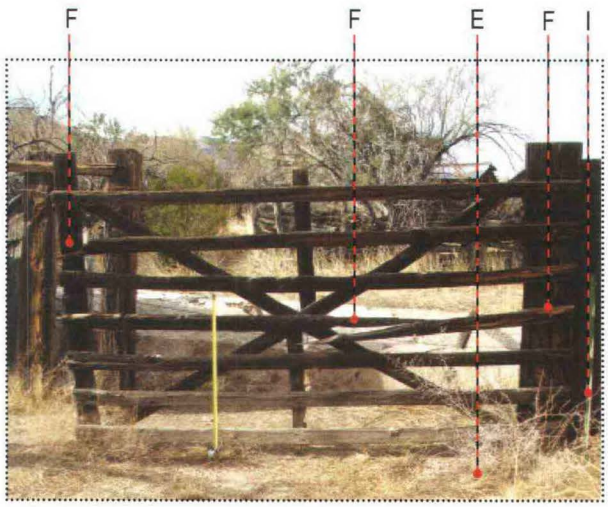
Gate #1 (see plan on page 47 for location)



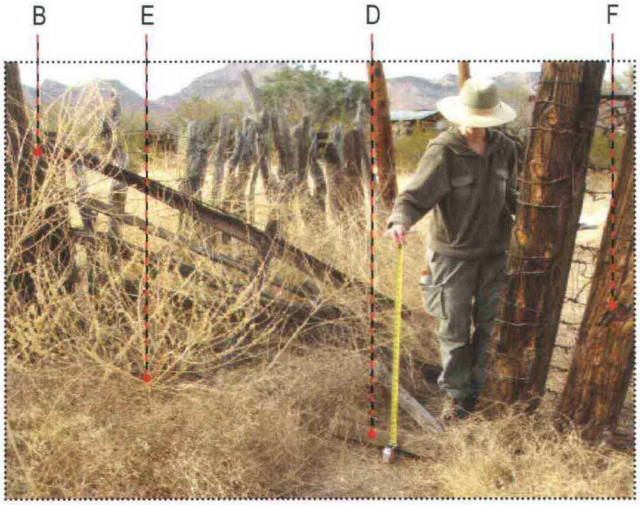
Gate #2 (see plan on page 47 for location)



Gate #3 (see plan on page 47 for location)



Gate #4 (see plan on page 47 for location)



Gate #5 (see plan on page 47 for location)

	Deficiencies	Recommended Treatments	Priority
A	Complete structural collapse	Reconstruct collapsed portions using original material where possible; if original material is missing like elements should be used in the reconstruction	Critical
B	Partial structural collapse	Stabilize the structure where possible, any collapsed portions should be reassembled	Critical
C	Structural undermining attributed to water	Correction of the water source; replacement of earth where water has caused undercutting	Critical
D	Material displacement	Reinsertion of material where ever possible; if material is cracked or severely damaged replacement with a similar element is suggested	Serious
E	Vegetable overgrowth	Trim or remove vegetation within the corral	Serious
F	Cracking of wood from lack of moisture	Replace only when threatens the stability of the member	Low
G	Staining of wood due to water	Allow to occur naturally	Low
H	Missing material due to vandalism	Replace material with similar element	Serious
I	Addition of contemporary elements	Where possible remove anachronistic material	Low

South Corral

SHPO Structure #: HS01L

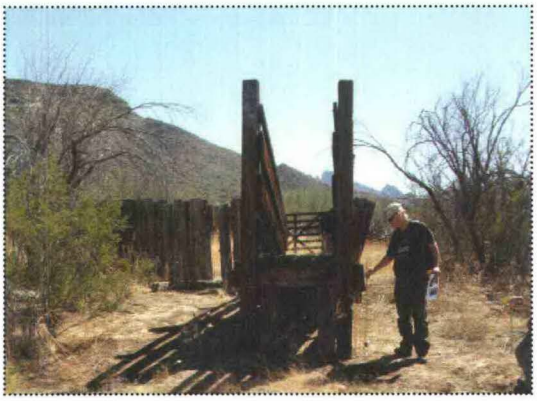
UTM: Zone 12 315956E 3560573N

Significance: High

Condition: Fair

Priority: Serious

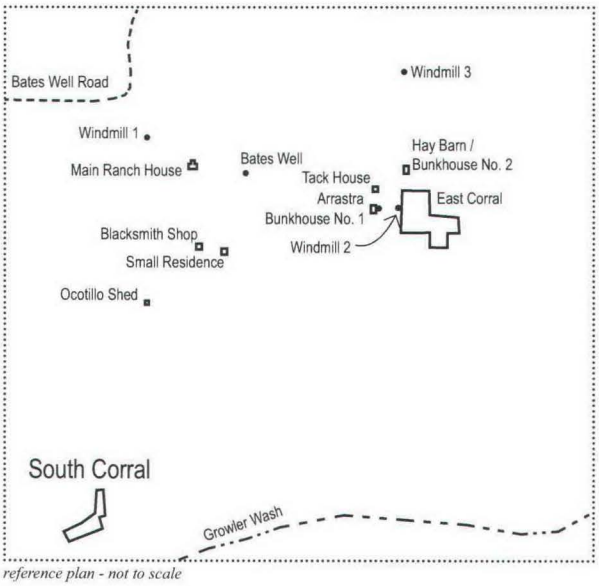
Character Defining Features: Different materials used to construct pens



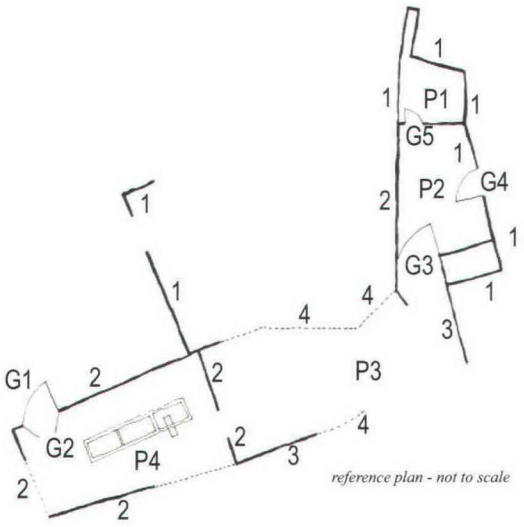
The South Corral is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert L. Gray Sr.'. The period of significance has been identified as 1913-1942. The South Corral was probably constructed within this period and formed a necessary structure to support the ranching activities at Bates Well.

Physical Description

Approximately 1050' SSW from the main residence, the structure is a roughly 'L' shaped configuration of four conjoined pens. The four pens are constructed predominately of salvaged railroad ties and mesquite logs, though various other materials make their appearance throughout the composition. As in case of the East Corral, each of the pens in the South Corral is unique. Pen 1, referred to as P1 in the plan below, is the smallest of the southern pens. Constructed of railroad ties, vertically oriented and bound together with barbed wire, it served as the loading pen for the South Corral.



reference plan - not to scale



Plan view of the South Corral. P signifies Pen, *G signifies* Gate *and along with the numbers correspond with the illustrations on the following pages. Dashed lines signify collapsed fencing.*

The pen is slightly irregular in shape having a northern fence that angles gently toward a cattle chute in the northeast corner. The cattle chute is once again constructed of milled lumber and extents at an angle toward to the adjacent trail. Pen 2, P2 in the plan above, extends south from Pen 1 and partially shares its construction of vertical railroad ties. However, the orientation of the railroad ties changes part way along the eastern fence to a horizontally constructed split rail fence. Pen 2 also contains a shade structure of the now familiar mix of materials ranging from metal piping, used as horizontal cross beams, to scraps of broken lumber stacked on top to provide a semblance of shade.

Pen 3 is a larger holding pen of mostly horizontally stacked mesquite logs, supported at irregular intervals by vertical mesquite posts, extending roughly eastward from Pen 2. This type of fencing is sometimes referred to as *retaque*, Spanish for: cut in little pieces.

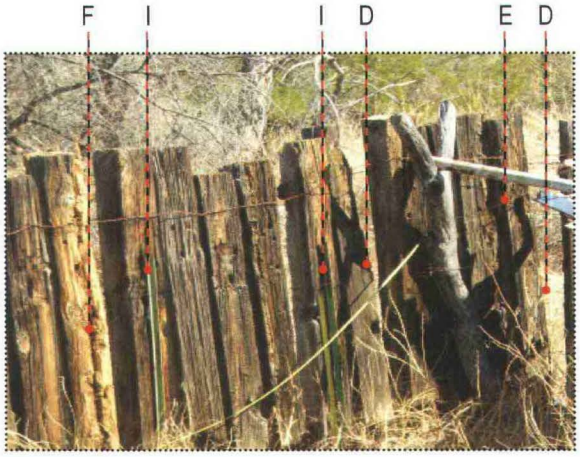
Pen 4 again reverts to a formation of railroad ties, a split rail fence being constructed of the weighty members in an approximately rectangular pen. It is in this the fourth pen that a three-part watering trough resides. Built partially into the ground of 10" thick concrete, the watering trough is fed through a series of pipes from the well located at Windmill 1, close to the Main Ranch House. The South Corral watering trough has a pair of small ramp-like structures which were constructed by the NPS, likely in the 1970s or 1980s (Rutman, 2006), to allow animals out of the troughs. Constructed of lumber and wire mesh and infilled with river rocks, they stand adjacent to one another, one in and one out of the trough. Also in the fourth pen are the distinctive trigger gates of the southwest ranching typology. A pair of lumber constructed gates placed in a 'V' formation interiorly, the trigger gates allowed cattle to enter the corral but their pointed ends and narrow outlet prevented the cattle from leaving again.

Condition Assessment

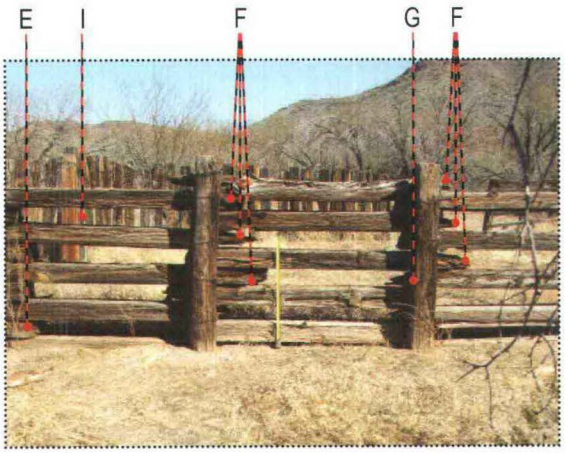
At present, the condition of the structure has been assessed as fair relative to the condition of the other ranch structures on site. There are a growing number of structural failures existing at present in the fences. Both mesquite and railroad tie fence construction evidence varying degrees of degradation. In some cases the eventual surrender to gravity has been arrested by adjacent vegetation but in all cases wood elements have suffered from extensive weathering, which has contributed to structural collapse.

General Recommendations for Treatment

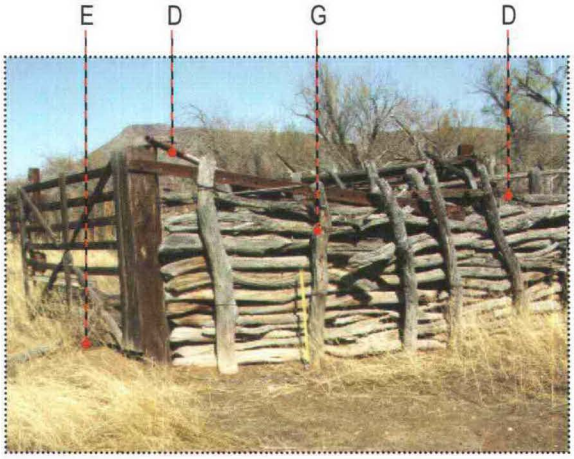
The recommended treatment for the South Corral is Restoration as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



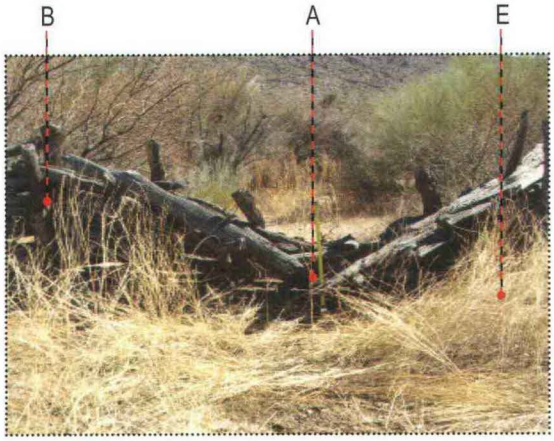
1 *Vertically oriented railroad ties bound with barbed wire*



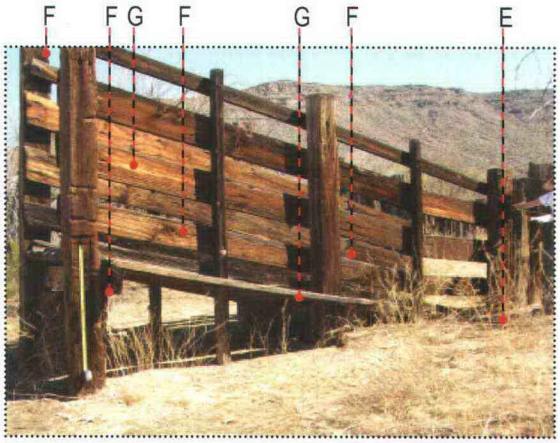
2 *Horizontally stacked split rail fencing utilizing railroad ties & barbed wire for stability*



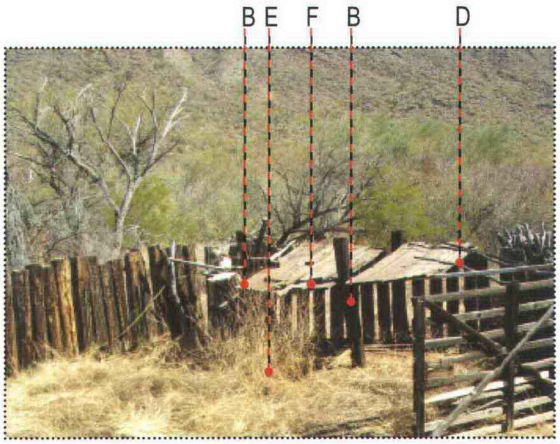
3 *Horizontally stacked mesquite logs with irregularly spaced vertical mesquite supports*



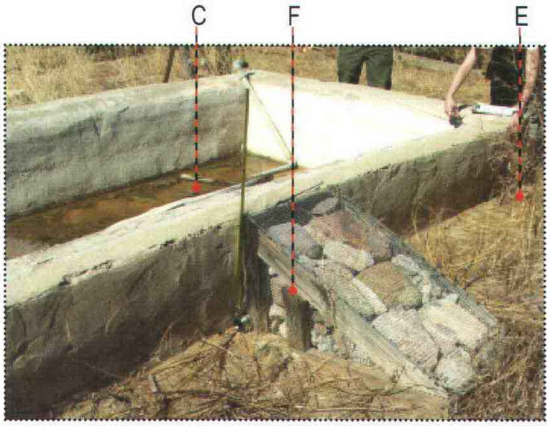
4 *Collapsed portion of mesquite stacked fence*



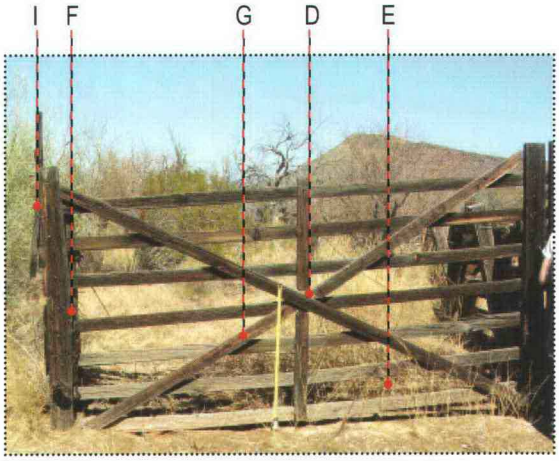
East elevation of the cattle chute (letters refer to notes in condition assessment table)



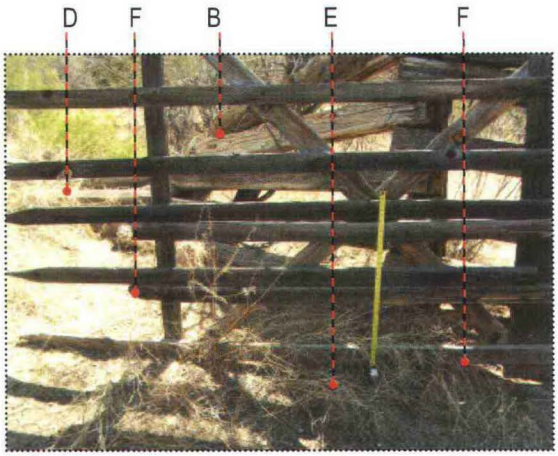
Southeast elevation of the shade structure (letters refer to notes in condition assessment table)



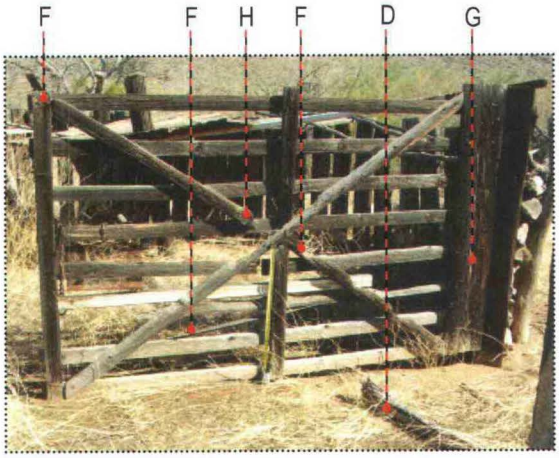
Southwest view of the concrete trough and ramp-like configurations (letters refer to notes in condition assessment table)



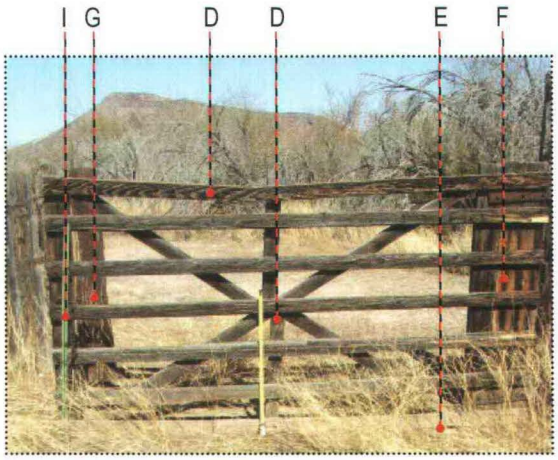
Gate 1 (see above plan for location)



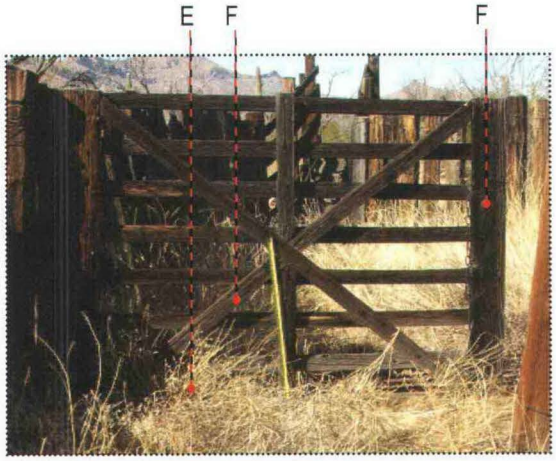
Gate 2 Trigger gate (see above plan for location)



Gate 3 (see above plan for location)



Gate 4 (see above plan for location)



Gate 5 (see above plan for location)

	Deficiencies	Recommended Treatments	Priority
A	Complete structural collapse	Reconstruct collapsed portions using original material where possible; if original material is missing similar elements should be used in the reconstruction	Critical
B	Partial structural collapse	Stabilize the structure where possible, any collapsed portions should be reassembled	Critical
C	Pooling of stagnate water	Reinstate well water circulation by reactivating windmill/well and repairing metal pipeline from well to trough	Low
D	Material displacement	Reinsertion of material where ever possible; if material is cracked or severely damaged replacement with a similar element is suggested	Serious
E	Vegetable overgrowth	Trim or remove vegetation within the corral	Serious
F	Cracking of wood due to exposure	Replace only when threatens the stability of the member	Low
G	Staining of wood due to water	Allow to occur naturally	Low
H	Missing material	Replace material with similar element	Serious
I	Addition of contemporary elements	Where possible remove anachronistic material	Low

Arrastra

SHPO Structure #: HS01H

UTM: Zone 12 316221E 3560832N

Significance: High (Mining)

Condition: Fair

Priority: Minor

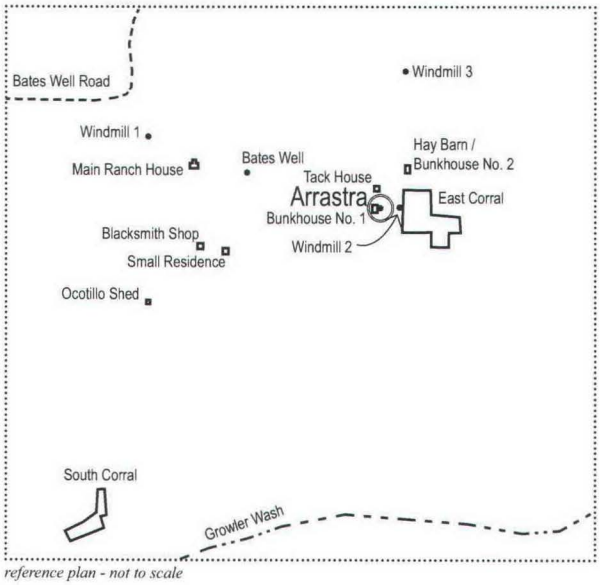
Character Defining Features: Granite stone ring, metal axle



Arrastras similar to the one found on the Bates Well Ranch site are common in the southwestern United States and northern Mexico (Keane and Rogge, 1992), and were used to grind ore as the first step in the processing and retrieval of valuable metals. Mules or burros would have been utilized to provide motive power. The location of the feature, immediately to the east of Bunkhouse 1, would have precluded its further use, and suggests that it was *in situ* and abandoned prior to the construction of other buildings on the property. The NPS feature description states that it was likely constructed in 1909 or earlier, although no documentation, other than a verbal communication with historian Wilton Hoy exists to verify this.

Physical Discription

The Arrastra on the Bates Well Ranch site is located approximately 10 feet to the east of Bunkhouse 1 and is located at the center of the largest grouping of ranch buildings that surround the East Corral. The Arrastra is approximately 8' in diameter and constructed of flat-topped granitic stones set at grade; several of the support stones forming the base are missing. Several stones are lying to the south of the bunkhouse that may be the stones missing from the arrastra. A 3'-9" tall machined metal axle is inset in the center of the feature and would have provided support for the grinding wheels or drag stones. Based on the material methods used to construct the support axle, it is likely that it is Anglo in origin.



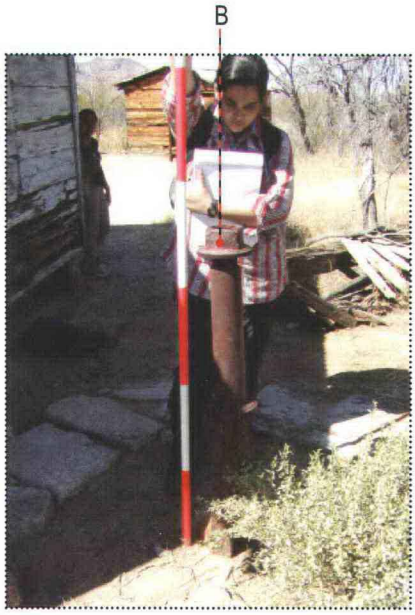
reference plan - not to scale

Condition Assessment

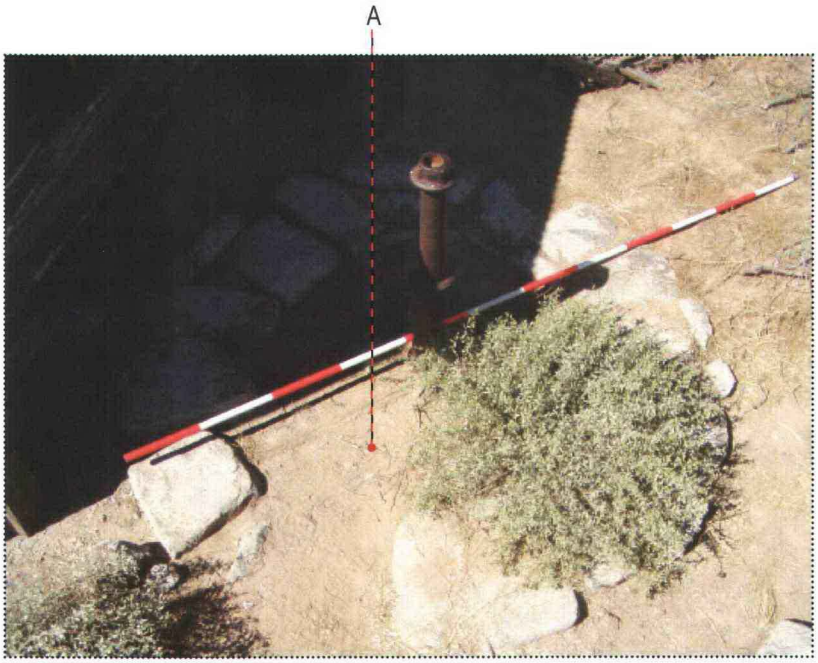
The Arrastra is in fair condition, although there is some minimal sheetwash erosion and disturbance from vegetation growth.

General Recommendations for Treatment

The recommended treatment for the Arrastra is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



Center axle of Arrastra (letters refer to notes in condition assessment table below)



View of Arrastra from the south (letters refer to notes in condition assessment table below)

	Deficiencies	Recommended Treatments	Priority
A	Missing Granite Stones	Replace with same	Medium
B	Missing arm and grinding wheel	Replace if period becomes part of significance.	low

Bates Well (Non-Historic)

SHPO Structure #: HS01P

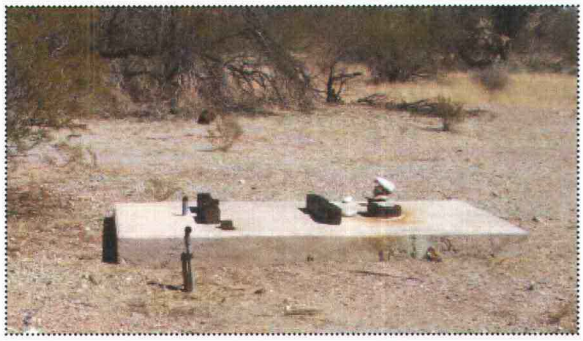
UTM: Zone 12 316098E 3560882N

Significance: Fair

Condition: Fair

Priority: low

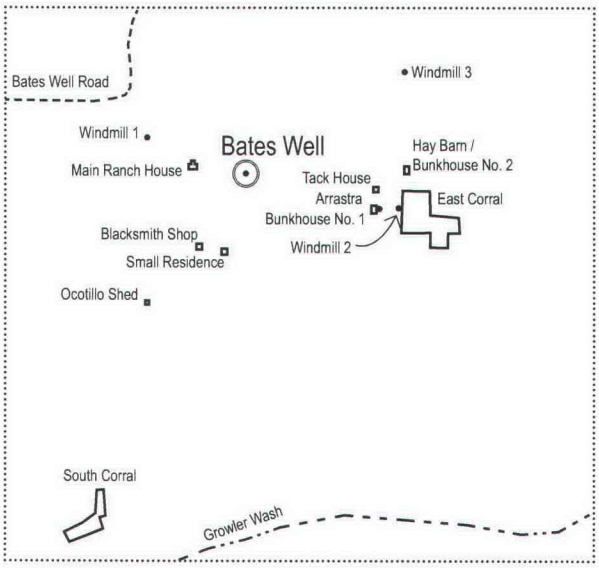
Character Defining Features: none remaining from period of significance



The Bates Well is one of the contributing structures to the Bates Well Ranch, entered on the National Register of Historic Places under Criterion A - 'Sonoran Desert Cattle Raising' and B - 'Association with Robert Gray.' The period of significance has been identified as 1913-1942. However, according to NPS staff (Rutman 2006), the well referred to in the National Register of Historic Places nomination form as "Bates Well" is actually a well drilled following the obliteration of the Daniels Well in a 1951 flood. The Bates Well formed a necessary structure to support the ranching activities at Bates Well.

Physical Description

The 4' x 8' concrete pad poured at the top of the well is the most distinguishing element. Two wooden blocks and three metal clips are still attached to the slab accompanying the actual well cap of rusted iron set into the concrete. Adjacent to the slab is a wooden box framed with metal measuring 14" x 2'-9" x 1'-7"" that may have once supported the water tank. The metal water tank itself is located a short distance away. Its matte silver surface shows the seams where metal plate attach to one another. The cylindrical tank it topped by a conical cover, through which a small circular hole is cut to allow access. As pictured in the following 1979 photographs, there was once a wooden structure that elevated the water tank.

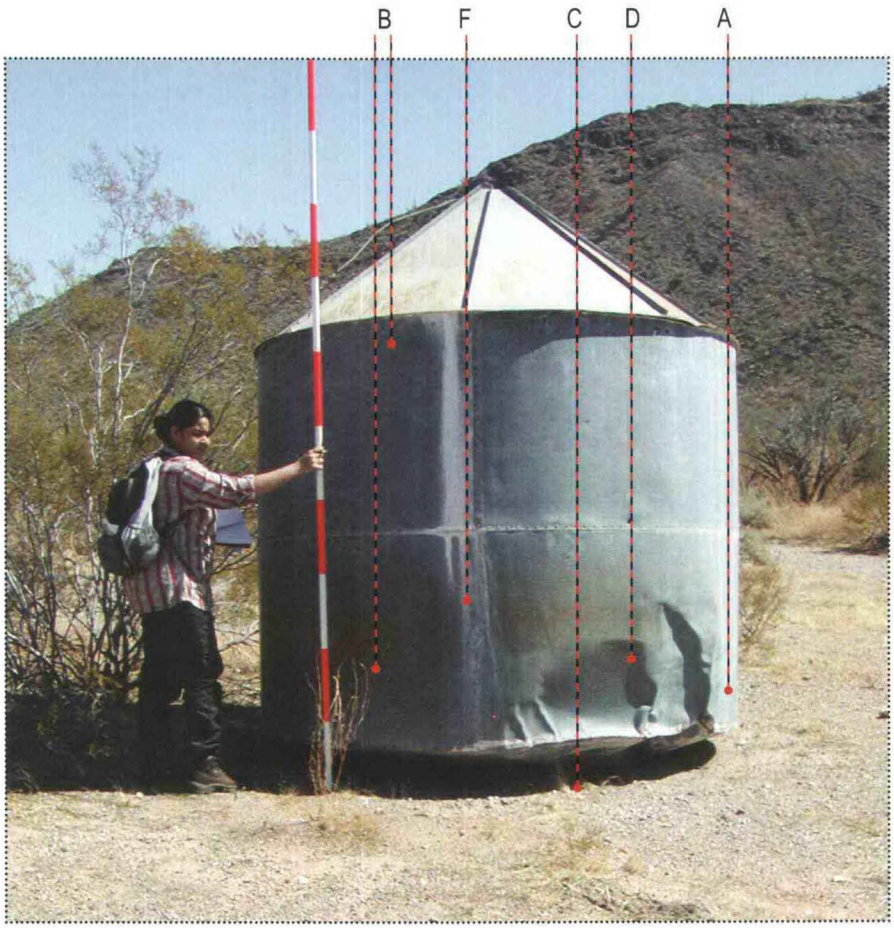


Condition Assessment

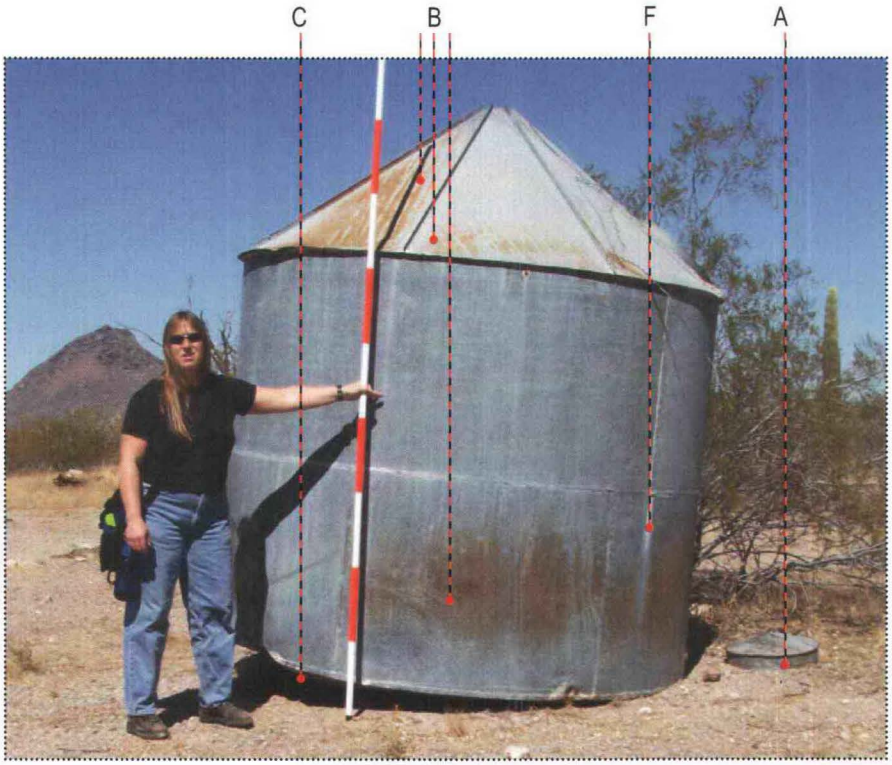
At present, the condition of the structure has been assessed as fair relative to the condition of the other ranch structures on site. There are few visual clues however to associate the individual pieces with what was once a critical element of daily ranch life for the Bates Well Ranch.

General Recommendations for Treatment

The recommended treatment for Bates Well and its associated water tank is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.

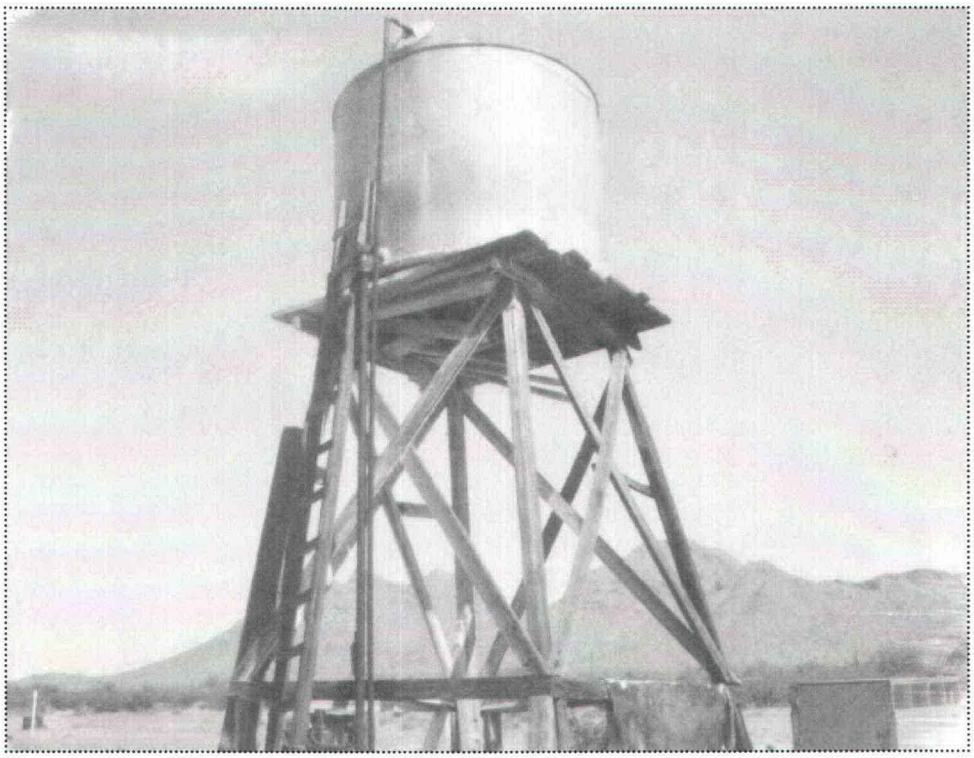


East elevation of the water tank (letters refer to notes in condition assessment table)



South elevation of the water tank (letters refer to notes in condition assessment table)





Bates Well water tower, May 1979, Organ Pipe Cactus NM Photo Archive No. 614



Bates Well and water tower, May 1979, Organ Pipe Cactus NM Photo Archive No. 616



Bates Well water tower, May 1979, Organ Pipe Cactus NM Photo Archive No. 615

	Deficiencies	Recommended Treatments	Priority
A	Material displacement	Reorganize elements into historic configuration	Serious
B	Corrosion of iron due to water	Replace elements whose integrity is damaged by corrosion	Serious
C	Convexity caused by structural damage	Re-form tank bottom	Serious
D	Concavity in metallic sheeting	Reform the tank sides	Serious
E	Vegetation overgrowth	Trim or remove vegetation that obscures visibility of well elements	Serious
F	Staining of material due to water	Allow to occur naturally	Low

Windmill 1

SHPO Structure #: HS01M

UTM: Zone 12 316013E 3560906N

Significance: Fair

Condition: Fair

Priority: Minor

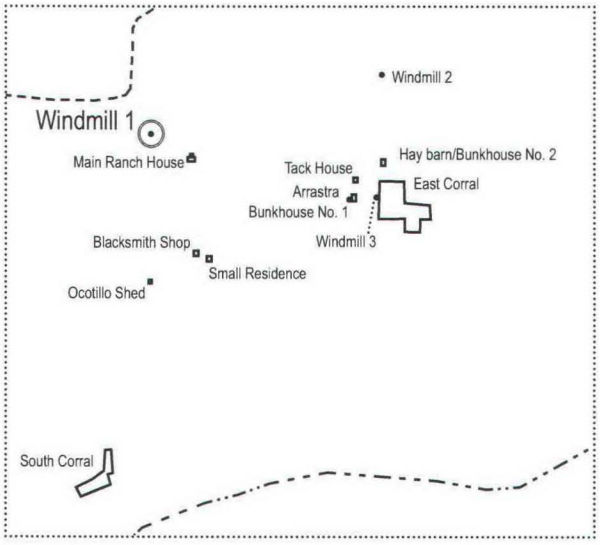
Character Defining Features: Steel Frame, diagonal bracing, ladder, blades, vane, pump, well-cap, concrete pad



This windmill and drilled well, constructed in 1953, is listed as "noncontributing" in the National Register of Historic Places nomination form completed in 1986. It is now old enough to be eligible of historic recognition.

Physical Description

Windmill 1 is located approximately 75' NW of the Main Ranch House . It is a metal A frame windmill, with a 7' square base. It is constructed of 2-1/2" x 2-1/2" x 1/8" galvanized steel angles at the corners, with 1" x 1" galvanized steel angle horizontal members. It also has a 1/4" steel wire diagonal brace. The vane has "WOODMANSE AIR_MASTER FREEPORT ILL" stencilled on it, indicating the manufacturer of the windmill. The well has a concrete cap around the water pipe that measures 2'-7" x 3'-5". Henry Gray has signed the concrete "H. Gray 7/21/53". The water trough at the South Corral was fed by a long pipe connected to this well.



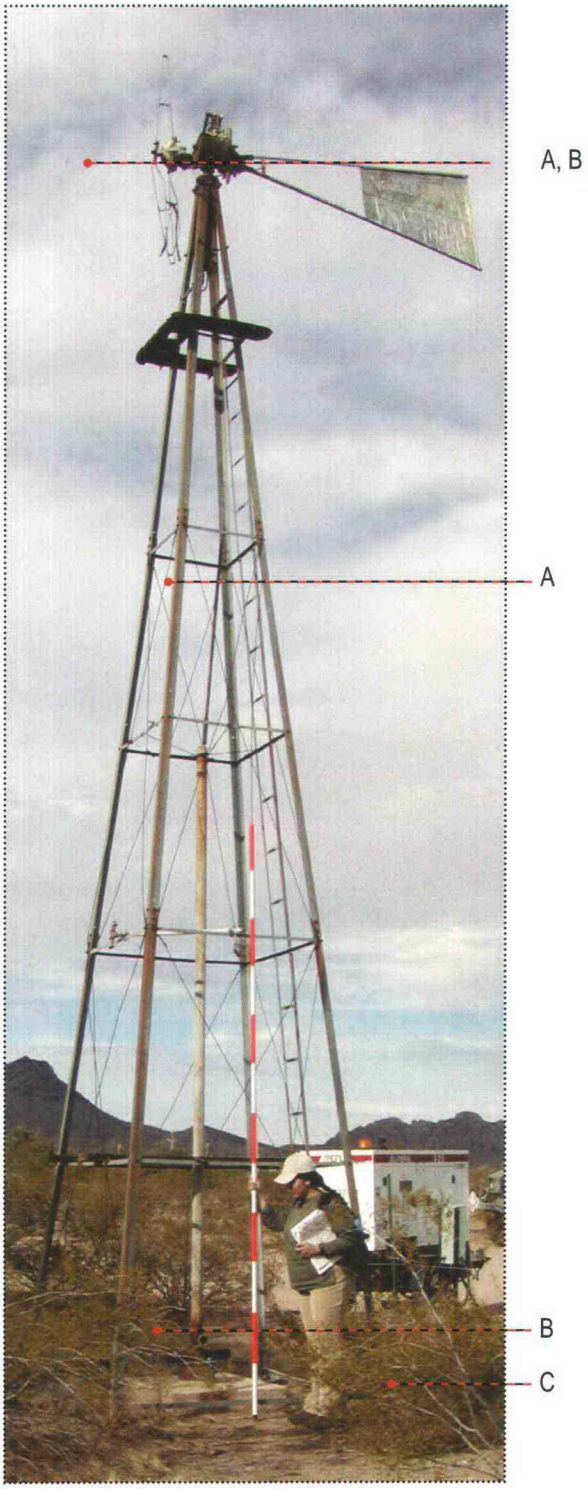
Condition Assessment

Windmill 1 is the most recent of all windmills on site, and is nearest to the Main Ranch House. Its frame is in good shape, with none of the members missing or badly deteriorated. There is not a significant amount of rust damage. The motor and rudder on the windmill are intact, but the blades have fallen to the ground, and lie near the base of the windmill. Some of these may be missing, and certainly many are damaged. The rod that connects the windmill to the well in order to pump the water is broken, and hence the pumping mechanism is

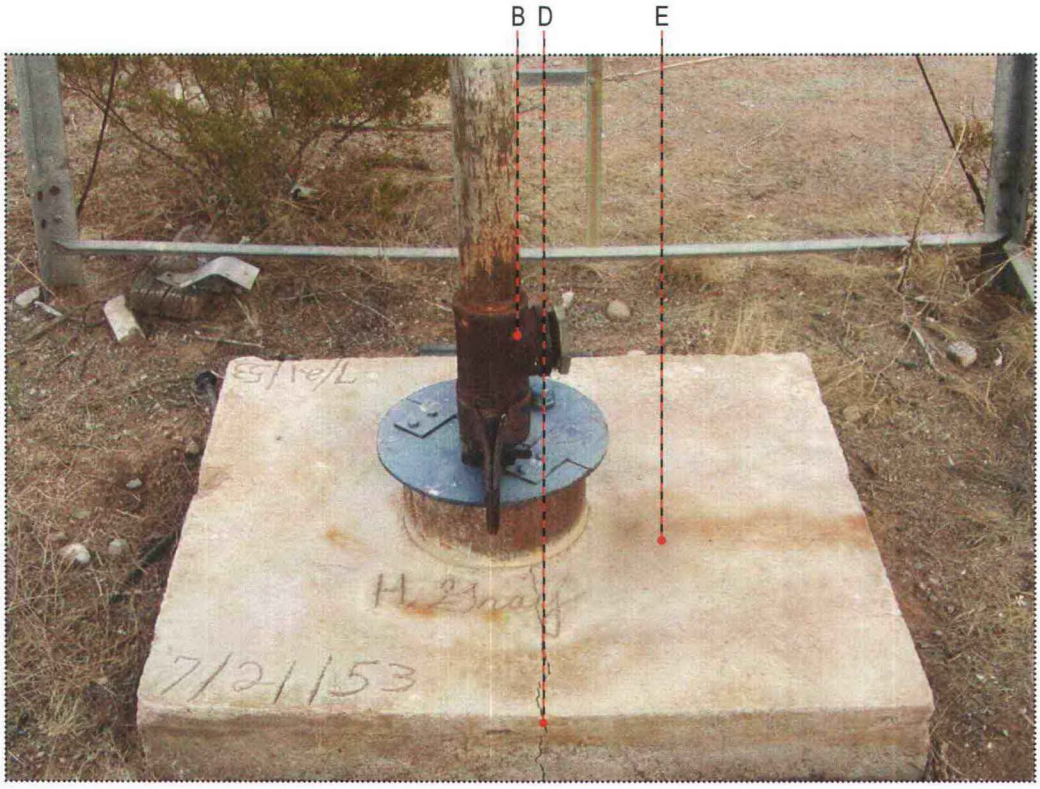
dysfunctional. The pipes that brought water from the well to the Southern Corral are disconnected and broken and pieces lie around the base of the structure. The concrete pad is in good shape

General Recommendations for Treatment

The recommended treatment for Windmill 1 is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. For more specific treatment recommendations, see the *Ultimate Treatments* section.



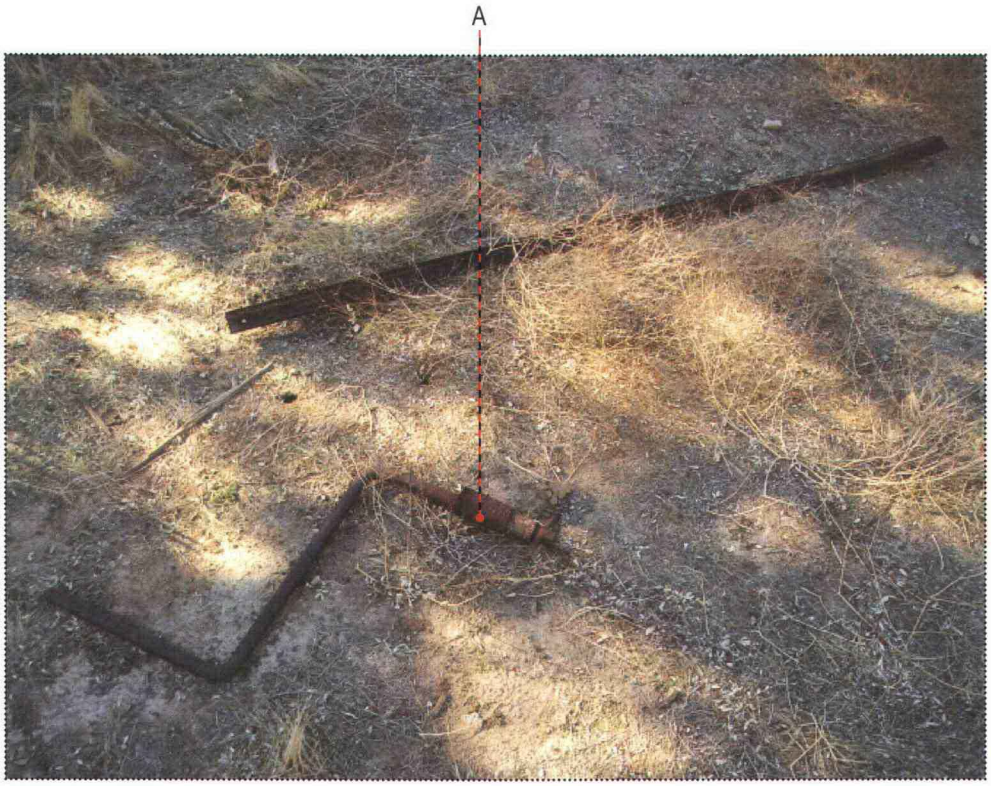
View of Windmill 1 from the south side showing existing damages and deficiencies. (letters refer to notes in condition assessment table below)



Well pad and cap (letters refer to notes in condition assessment table below)



Base of Windmill 1 with associated debris (letters refer to notes in condition assessment table below)



Bits of the pipe that fed water from Windmill 1 to the trough at South Corral.. (letters refer to notes in condition assessment table below)

	Deficiencies	Recommended Treatments	Priority
A	Detached and/or missing components: Windmill Blades missing, Connector between rotor and well pump detached. Horizontal member detached at base of windmill frame. Pipes to Southern Corral detached, missing and rusted	Repair and Reattachment of existing members if possible. Replacement of damaged/missing members with like material.	Critical
B	Rusting of metal parts: well cap, pipe, diagonal bracing of windmill frame	Chemically treat or replace elements whose integrity has been damaged by corrosion	Critical
C	Vegetation overgrowth around structure	Trim or remove vegetation that obscures visibility	Serious
D	Staining of material due to water	Allow to occur naturally	Low
E	Cracking in Concrete Pad	Stitch crack or replace pad	Low

Part Two:
TREATMENT AND USES

Introduction

Currently, the National Register Nomination for Bates Well focuses its attention almost exclusively on the area's involvement with frontier cattle raising. This is understandable based on the highly visible structural artifacts remaining from this period of use as well as the immediate volume of personal information regarding the Gray Family on-site. However, as we have seen, the cultural landscape of the area inhabited by Bates Well Ranch is far richer.

Alluded to, but not well enumerated in the National Register Nomination, are other periods of significance that through active interpretation can become important contributors to the cultural understanding of Bates Well. Among those mentioned is the theme of mining, which, because of the well, had an imminent tie to what would later become the Bates Well Ranch. Predating this though are multiple levels of Native American use and habitation. The National Register Nomination briefly mentions an on-site O'odham Village discovered in the 1800s but further archeological indicators give evidence of site involvement from the Archaic Period forward including such transient phenomena as the Shell Trail.

These multiple layers of cultural significance join together in expressing one over-arching thematic point: the overwhelming importance of water. This in turn also emphasizes the significance of the surrounding landscape, as its geography and ecology relate to the capture of water.

It is therefore recommended that the National Register Nomination be updated to include these related themes of significance, as far as evidence will allow, shifting the focus from a solely ranching point of view to an emphasis upon that which has made the site so inviting for so many forms of human settlement.

Ultimate Treatments

This section presents the ultimate treatment recommended for the Bates Well Ranch district and the rationale for the treatment decision. Presentation of the ultimate treatment shall take the form of recommendations for a proposed new use for the district that will guide the preservation requirements for treatment outlined in the next section.

Proposed New Use

The site's remoteness from other Monument facilities, including the Kris Eggle Visitor Center, contributes to the difficulty in the management of its resources. In addition, the Border Patrol currently maintains a camp directly adjacent to the Main Ranch House that, on one hand, acts as a deterrent for unauthorized use of, and vandalism of, the site by the increasing number of undocumented aliens crossing through the Monument, but on the other hand, compromises the interpretative experience of the site due to the visual and aural intrusion of the camp.

This report makes the following recommendations:

1. Amend the National Register nomination to include a more comprehensive ranching context, and incorporate additional themes of significance representing a broader interpretation of the historical use of the site, including water, transportation, and mining.

2. Develop and implement a phased interpretation plan that creates a). off-site exhibits at the Visitor Center that includes multiple themes of significance, b). on-site signage for overall ranching context and at each building/structure, and c). interactive on-site exhibits with building accessibility.

3. Implement a phased treatment plan that identifies two tiers of the physical complex including a Tier One core ranch and landscape physical context —Main Ranch House, East Corral, Windmill No. 2 (Historic Bates Well), Arrastra, Ocotillo Shed— and a Tier Two ranch and landscape physical context around the core Tier One complex —Windmills Nos.1 & 3, Bates Well (non-historic), Small House, Blacksmith Shop, Tack House, Bunkhouse, Hay Barn, Southern Corral— that focuses on the restoration of the character defining features of the landscape, buildings and structures. This recognizes that the specific recommended treatments must be done in conjunction with the Monument's enhancement of the comprehensive interpretation plan regarding its cultural resources. These ultimate treatment recommendations should be implemented in coordination with the site's ultimate use defined in a phased plan below.

Recognizing the challenges of justifying funds for the preservation treatments of cultural resources for which there is little or no interpretive program, this report defines a spectrum of use scenarios and are intended to define extreme, as well as moderate, scenarios. These scenarios are presented to guide the Monument in defining the site's appropriate ultimate use and the phasing of interpretive and preservation treatment recommendations outlined in this report. These scenarios are intended to be implemented cumulatively and in sequential order:

1. No Action
    - No treatment of buildings or site features; buildings and site features would be allowed to deteriorate.
    - Border Patrol presence continues as a deterrent to unauthorized use of buildings and decline of site integrity, but also compromises integrity of interpretive experience of the site.

2. Off-Site Interpretation / No On-SiteTreatment
    - Amend the National Register nomination to include other themes of significance for the site and larger sub-area of the Monument.
    - Interpretation efforts to be concentrated off-site at Visitor Center.
    - Even though Border Patrol presence is a major deterrent to visitation, site access should be encouraged with appropriate notification of liability regarding security and accessibility, as well as the role of the Border Patrol at the site.
    - No treatment of buildings or site features; buildings and site features would be allowed to deteriorate.

3. Minimal On-Site Interpretation
    - No building treatments
    - On-site interpretive signage for overall ranch context and at each structure.
    - Move Border Patrol camp away from immediate adjacency to Ranch site.
    - Venue for "event" visitation (horseback & jeep tours, storytelling, etc.)

4. Implement Recommended Treatments for Tier I Structures
    - Defined as the core ranch and landscape physical context (Main Ranch House, East Corral, Windmill 2 (historic Bates Well), Arrastra and adjacent landscape) representing association with multiple ranch function/use types, building materials and site features, as well as opportunity to introduce multiple themes of significance (water, mining, ranching).
    - Requires Border Patrol presence and potential for unauthorized use of the site to be reduced.

5. Implement Recommended Treatments for Tier II Structures
    - Representing a larger sphere of physical complex and landscape around core Tier I structures (Windmills #1 & #3, Bates Well (non-historic), Small House, Blacksmith Shop, Tack House, Bunkhouse, Hay Barn, Southern Corral and adjacent landscape)
    - Rehabilitate Main Ranch House to provide indoor interpretive exhibit of ranch life.

Requirements and Alternatives for Treatment

This section provides the components of preservation treatment and instructions for their execution. Recommendations respect the character-defining features of the Bates Well Ranch district and are intended to retain, preserve, and restore those features. The treatments below assume the implementation of scenarios 4 and 5 in the preceding *Ultimate Treatments* section of this report and address the deficiencies discussed in detail in the *Physical Description* section. For a comprehensive list of deficiencies and the exact location of their occurrences, please see the *Physical Description* section.

Bates Well Ranch Site and Surrounding Landscape

The recommended treatment for the Bates Well site and surrounding landscapes' character-defining features is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. This includes the configuration of the ranch complex of buildings, structures, and features and the landscape elements, including roads and the native vegetation, whose relationship to the built features are equally critical to the ranching theme of significance. In order to preserve the ranching character of the site, and to minimize the danger of fire damage to the site's built resources, any re-vegetation of the area encompassed by the various structures included in this report is not encouraged. Non-native plants that have played a prominent role in the landscape during the site's ranching period, such as the salt cedar adjacent to the Small Residence, should be maintained for their lifespan.

Main Ranch House

The recommended treatment for the Main Ranch House is *Rehabilitation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The Main Ranch House possesses the greatest level of integrity of all the structures at Bates Well Ranch. The immediate priority should be to stabilize the corrugated metal roof, either by repairing the existing material, or replacing, in-kind, with a new corrugated metal roof. The exterior stucco should either be repaired or replaced according to Secretary of Interior standards. Infill should be removed from windows and doors and replaced with aesthetically compatible windows and doors. In the case of windows, this means wood frame, double-hung windows, as can be seen in photographic evidence available in this report and at the Organ Pipe Cactus National Monument photographic archives. Interior rehabilitation should be simple and should attempt to follow as closely as possible the few existing finishes and those evidenced in available photographs. In order for the Main Ranch House to serve as an interpretive center for ranch life at Organ Pipe Cactus National Monument, as recommended in Scenario 5, its rehabilitation must comply with the following codes and standards (with applicable updates):

International Building Code 2003 (IBC-2003)
Minimum Design Loads for Buildings and Other Structures (ASCE 7-98)
Seismic Evaluation of Existing Buildings 2003 (ASCE 03-031)
National Design Specifications for Wood Construction (NDS-2005)
National Park Service, Director's Order 58: Structural Fire Management
Americans with Disabilities Act of 1990 (42 USC 12101, Title III)

Bunkhouse

The recommended treatment for the Bunkhouse is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The structure of the Bunkhouse should be stabilized immediately. Its rather informal foundation —stacked concrete blocks— should be stabilized and reinforced. The building is tilting towards the rear west corner, likely due to settling of the corner pier. The stabilization of the corrugated metal roof is the second priority and should be accomplished either by repairing the existing material or replacing, in-kind, with a new corrugated metal roof. Recognizing that the building was most likely never completely immune to infiltration from the elements and vermin, the building should be sealed as well as possible without harming the building's historic integrity. The wooden planks used to clad the building are deteriorating due to the combined effects of the harsh climate and the impact of microorganisms. Damaged or missing members should be replaced in-kind. Missing and damaged windows should be replaced with windows similar in character to the window still extant on the north facade. After repairing the wood cladding the building should be painted, using photographic evidence and the paint remaining on the building as a guide for color and placement. Interior restoration should be simple and should use existing evidence as a guide for treatments.

Tack House

The recommended treatment for the Tack House is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The structure of the Tack House should be stabilized immediately. Its rather informal foundation —stacked concrete blocks— should be stabilized and reinforced. The building is tilting towards the rear west corner, likely due to settling of the corner pier. The shed is leaning to the east and suffers from bowing of the wooden support posts, leading to instability. The stabilization of the corrugated metal roof is the second priority and should be accomplished either by repairing the existing material or replacing, in-kind, with a new corrugated metal roof. Recognizing that the building was most likely never completely immune to infiltration from the elements and vermin, the building should be sealed as well as possible without harming the building's historic integrity. The wooden planks used to clad the building are deteriorating due to the combined effects of the harsh climate and the impact of microorganisms. Damaged or missing members should be replaced in-kind. The missing and damaged windows and door should be replaced with windows and doors compatible with the character of the Tack House and the surrounding ranch structures.

Hay Barn / Bunkhouse No. 2

The recommended treatment for the Hay Barn / Bunkhouse No. 2 is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The structure of the Hay Barn should be stabilized immediately. Its rather informal foundation —stacked concrete blocks— should be stabilized and reinforced. The stabilization of the corrugated metal roof is the second priority and should be accomplished either by repairing the existing material or replacing, in-kind, with a new corrugated metal roof. Recognizing that the building was most likely never completely immune to infiltration from the elements and vermin, the building should be sealed as well as possible without harming the building's historic integrity. Much of the character of the Hay Barn is derived from the use of salvaged building materials in its construction and cladding, expressed by the various sizes and ages of the members used. Any restoration of the Hay Barn should take this into consideration and retain the diversity of building materials existing in the building. The missing and damaged windows and door should be replaced with windows and doors compatible with the character of the Hay Barn / Bunkhouse No. 2 and the surrounding ranch structures.

Blacksmith Shop

The recommended treatment for the Blacksmith Shop is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The Blacksmith Shop is an advance state of deterioration and without timely intervention the remaining structure will soon collapse. Although the Blacksmith Shop is on record as having been built during the 1930s, it appears that the building was subject to frequent maintenance that utilized whatever materials were readily available. It is likely that the extant building remnants bear little resemblance to whatever structure was built in the 1930s. Therefore, the restoration of the Blacksmith Shop (including the careful disassembly and reconstruction of the remaining structure and ramada) should focus not on expressing any particular era that the Blacksmith Shop existed in, but the idea that the Blacksmith shop has always existed as a conglomeration of whatever materials that would have been readily available. Historic photos, physical evidence, and the drawings provided in this report should be used to best restore the structure, with salvaged materials similar to those found throughout the Bates Well Ranch site used to replace missing material. Additionally, trees and grasses growing in, under and within 20 feet of the building should be removed to prevent possible fire damage.

Ocotillo Shed

The recommended treatment for the Ocotillo Shed is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. It appears that at one point, the building was entirely clad with saguaro ribs and ocotillo branches bound with wire, and when that failed, various materials such as plywood and sheet metal were used to repair the damaged areas. Restoration efforts should take this into consideration. The underlying saguaro rib / ocotillo cladding should be repaired, especially where it is the only cladding used, but the secondary cladding should also remain and also be repaired where needed. Existing material should be re-used whenever available. Missing material should either be harvested, in the case of saguaro ribs or ocotillo branches, or salvaged, in the case of structural members or cladding.

Small Residence

The recommended treatment for the Small Residence is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The structural stabilization of the Small Residence is critical and should be the first step in its treatment. Secondly the corrugated metal roof should be repaired or replaced in kind to prevent further damage from the elements. All damaged cladding materials that are replaced should be done with like materials, which in most cases will require that they be salvaged. The existing doors should be repaired and re-installed. The existing windows should be repaired and reglazed. The ramada, evident in historic photos, should not be rebuilt. Since more remains of the ramada at the Blacksmith Shop, that ramada should be used to interpret the indoor/outdoor lifestyle of the region's ranchers.

Windmill 2 (Historic Bates Well)

The recommended treatment for Windmill 2 is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. Windmill 2 is in the best condition among the three windmills on site, with its blades and vane intact and the capacity for rotation when a breeze is present. Its frame is in good condition, with none of the members missing or badly deteriorated. The windmill should be inspected to assure that there is no danger of parts detaching and potentially injuring visitors. The support structure for the water tank should be shored up and reinforced where necessary. Special care should be given to preserve the cattle brand etchings in the stone foundation. While the remaining parts of the windmill and its associated water tank should be maintained and preserved, and the windmill maintained so that the blades continue to rotate, it is not necessary to restore the windmill to a functional condition.

Windmill 3

The recommended treatment for Windmill 3 is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The blades of Windmill 3 have fallen to the ground, and lie near the base of the windmill. If it is possible and safe, the blades should be repaired and reattached to the windmill. If not possible or safe, then the blades should be placed in safe storage. Any other missing parts that have detached and are located on site should be reattached if possible. The windmill should be inspected to assure that there is no danger of parts detaching and potentially injuring visitors.

East Corral

The recommended treatment for the East Corral is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The varying construction techniques used in the East Corral underscore the necessity for isolated Arizona ranchers such as the Grays to utilize whatever scarce materials were available for the continuous projects that were part of ranching life. Since the character of the East Corral is determined by the number of different materials used, as much as the materials themselves, it is important that restoration work doesn't gravitate toward one type of fence construction over another. Whenever possible, collapsed portions of fencing should be reconstructed using the original materials from the collapsed fence, supplementing missing materials with like salvaged materials. If original materials are too badly damaged, or missing entirely, then the original method of fence construction, i.e., stacked mesquite logs, should be used with like materials.

South Corral

The recommended treatment for the South Corral is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The varying construction techniques used in the South Corral underscore the necessity for isolated Arizona ranchers such as the Grays to utilize whatever scarce materials were available for the continuous projects that were part of ranching life. Since the character of the South Corral is determined by the number of different materials used, as much as the materials themselves, it is important that restoration work doesn't gravitate toward one type of fence construction over another. Whenever possible, collapsed portions of fencing should be reconstructed using the original materials from the collapsed fence, supplementing missing materials with like salvaged materials. If original materials are too badly damaged, or missing entirely, then the original method of fence construction, i.e., stacked railroad ties, should be used with like materials.

Arrastra

The recommended treatment for the Arrastra is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. Several stones are lying to the south of the bunkhouse that may be the stones missing from the Arrastra. It should be determined whether this is likely, and if so they should be reinstalled. The Arrastra should be kept free of plant growth.

Bates Well

The recommended treatment for Bates Well and its associated water tank is *Preservation* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The concrete pad, attached machinery and water tank should be maintained and preserved as they are. Any parts located nearby on site that have become detached should be reattached.

Windmill 1

The recommended treatment for Windmill 1 is *Restoration* as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties. Windmill 1, constructed in 1953, was not yet old enough to be considered for the National Register of Historic Places nomination form completed in 1986. It is recommended that the nomination be updated to include Windmill 1. The blades of Windmill 1 have fallen to the ground, and lie near the base of the windmill. If it is possible and safe, the blades should be repaired and reattached to the windmill. If not possible or safe, then the blades should be placed in safe storage. Any other missing parts that have detached and are located on site should be reattached if possible. The windmill should be inspected to assure that there is no danger of parts detaching and potentially injuring visitors.

Alternatives for Treatment

The treatments listed above are applicable to Scenarios 4 and 5 as outlined in the *Ultimate Treatments* section of this report. Alternate treatments to those listed above are outlined as Scenarios 1, 2 and 3.

Additional Requirements for Treatment

As stated in the Director's Order on Cultural Resource Management (DO-28) and according to federal law and National Park Service policy, "all historic structures in which the Service has a legal interest are to be managed as cultural resources. Regardless of type, level of significance, or current function, every structure is to receive full consideration for its historical values whenever a decision is made that might affect its integrity."[1]

Section 106 of the National Histroric Preservation Act (NHPA) mandates that all federal agencies, including the National Park Service, take into account the effects of their actions on properties listed, or eligible for listing, in the National Register of Historic Places. The Advisory Council on Historic Preservation must be given a reasonable opportunity to comment on any actions effecting federal properties.

Preservation treatment should follow the Secretary of Interior's Standards for the Treatment of Historic Properties, and the guidelines for applying those standards. For definitions of the treatments recommended by this report, see Appendix A.

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1 National Park Service, Director's Order #28: Cultural Resources Managment : http://www.nps.gov/history/history/online_books/nps28/28chap8.htm (accessed June 16, 2007).

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Appendices

Appendix A: Definition of Treatments

The following definitions are taken from the National Park Service website: http://www.cr.nps.gov/hps/tps/standards_guidelines.htm

Preservation

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Preservation as a Treatment

When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment.

Rehabilitation

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Rehabilitation as a Treatment

When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate, Rehabilitation may be considered as a treatment.

Restoration

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.

2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.

6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.

7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.

8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

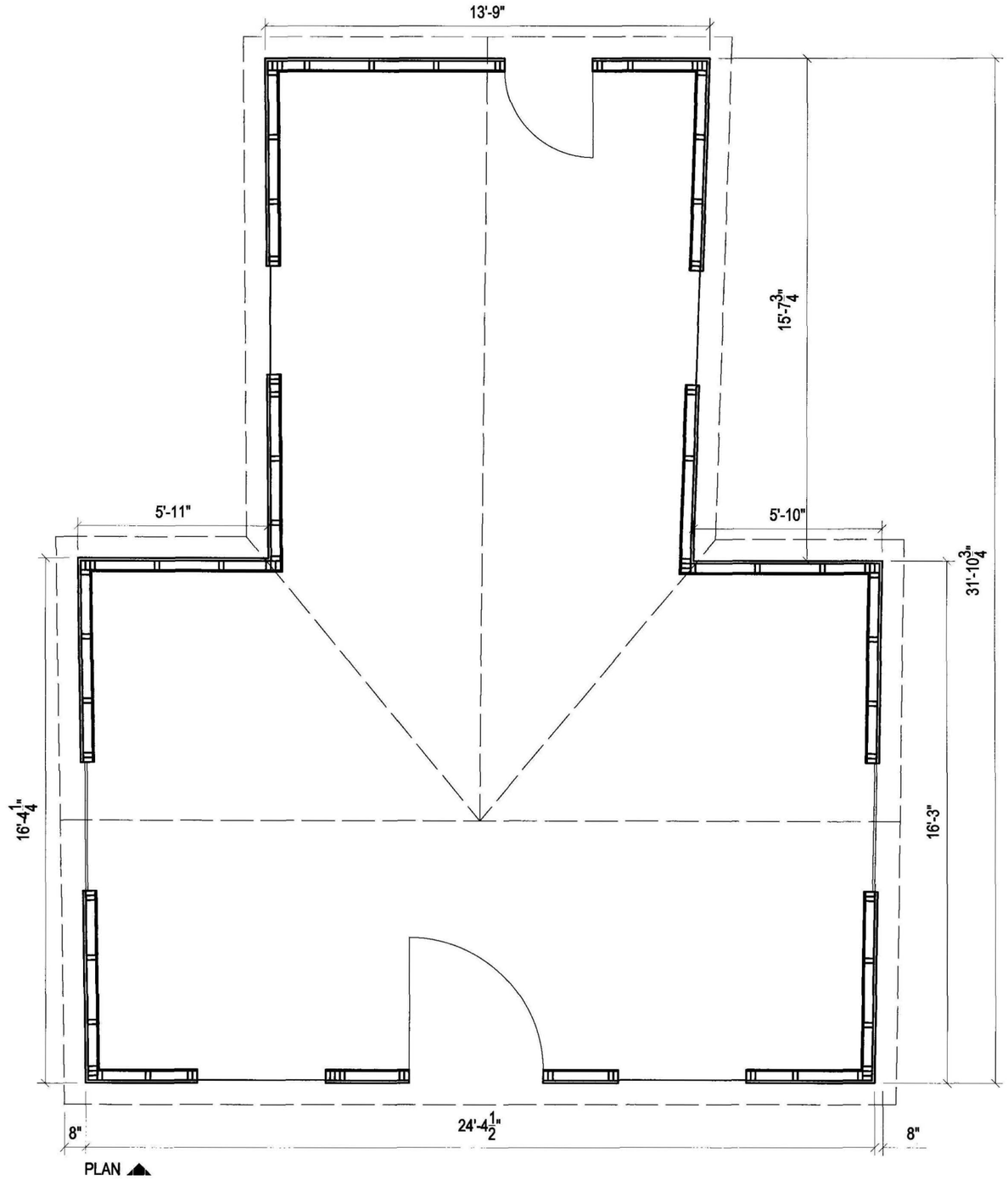
10. Designs that were never executed historically will not be constructed.

Restoration as a Treatment

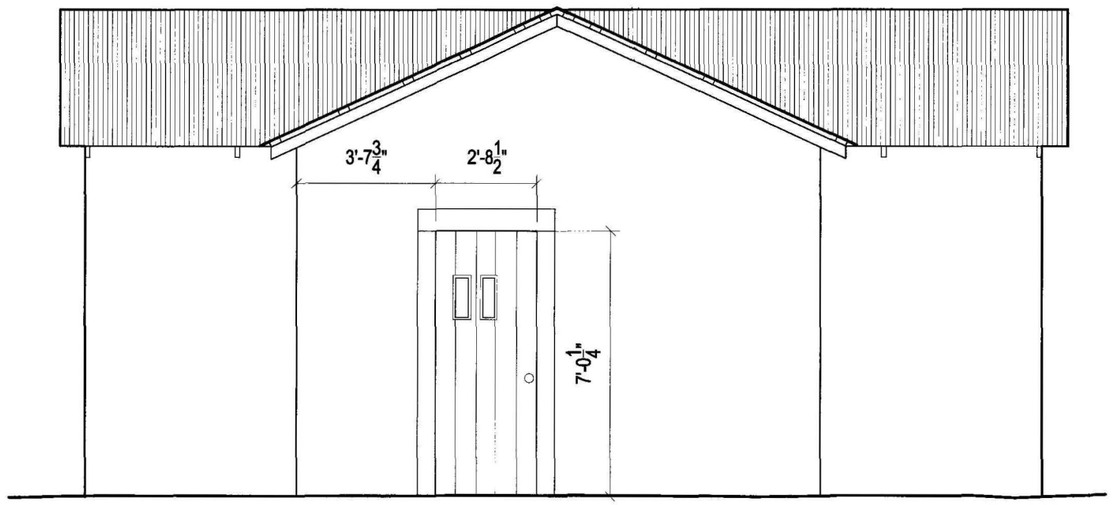
When the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; when there is substantial physical and documentary evidence for the work; and when contemporary alterations and additions are not planned, Restoration may be considered as a treatment. Prior to undertaking work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for Restoration developed.

Appendix B: Architectural Drawings

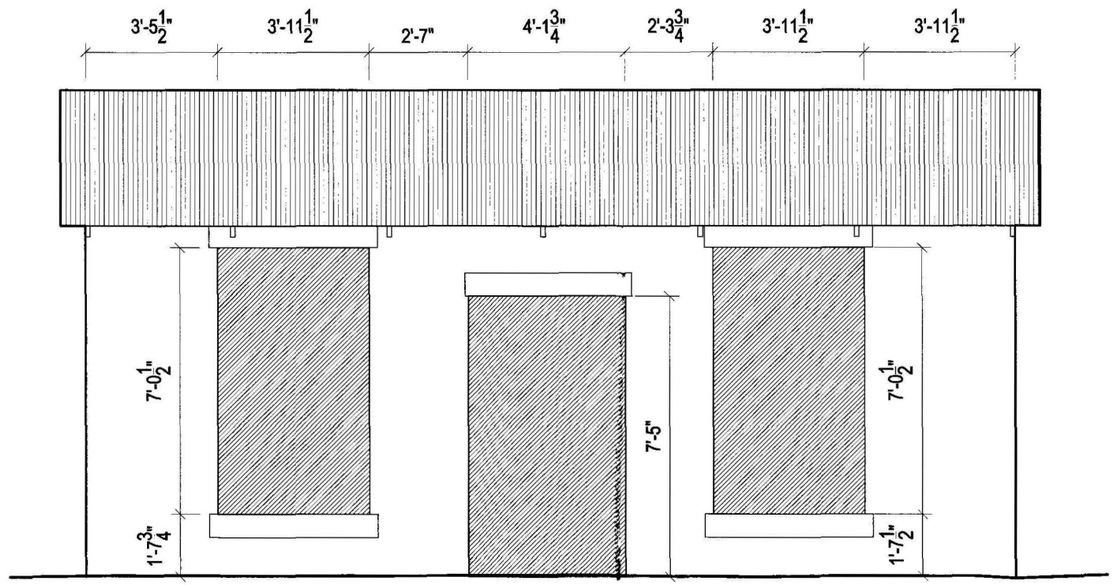
Building	*Drawing Numbers*
Main Ranch House	1,2
Bunkhouse	3
Tack House	4
Hay Barn / Bunkhouse 2	5,6
Blacksmith Shop	7
Ocotillo Shed	8
Small Residence	9
Windmill 2	10
Windmill 3	11
East Corral	12,13
South Corral	14,15
Arrastra	16
Baits Well	16
Windmill 1	17



PLAN



NORTH ELEVATION



SOUTH ELEVATION

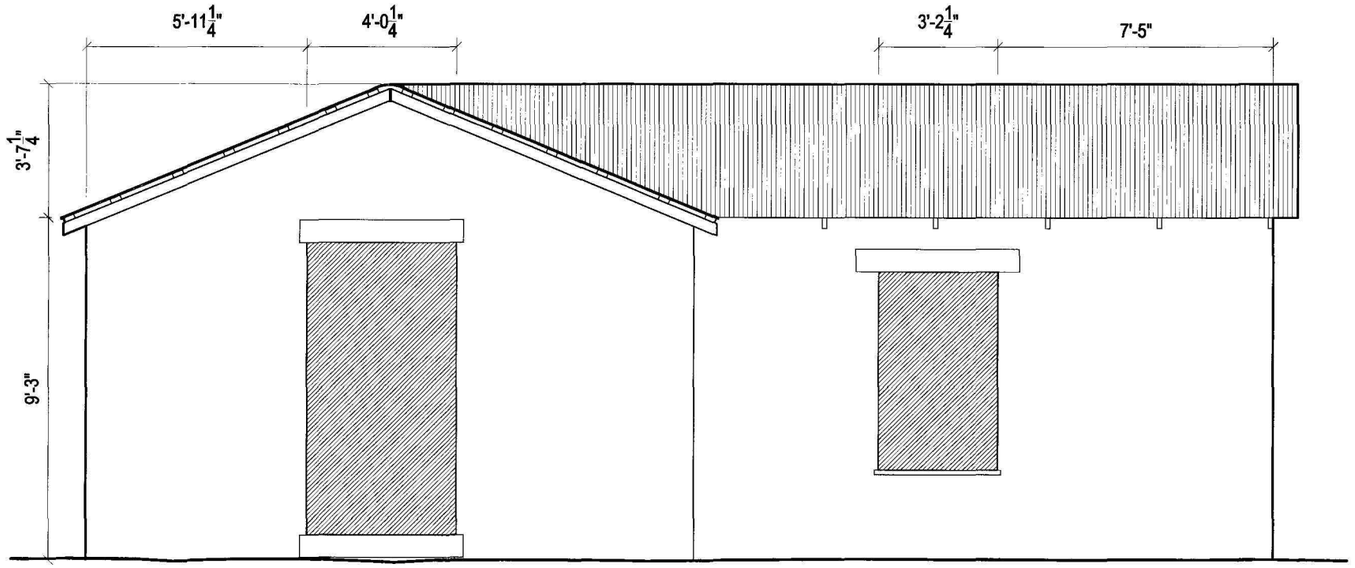
MAIN RESIDENCE

BUILDING NO. HS01A
BATES WELL RANCH

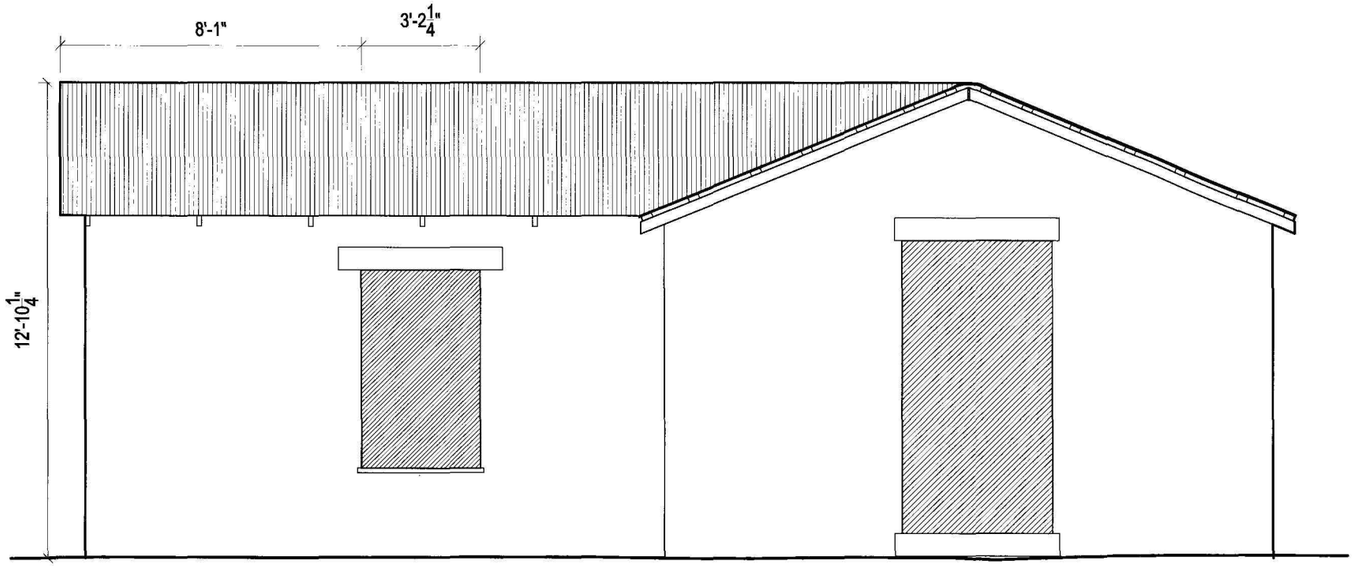
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SHEET NO.
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EAST ELEVATION



WEST ELEVATION

MAIN RESIDENCE

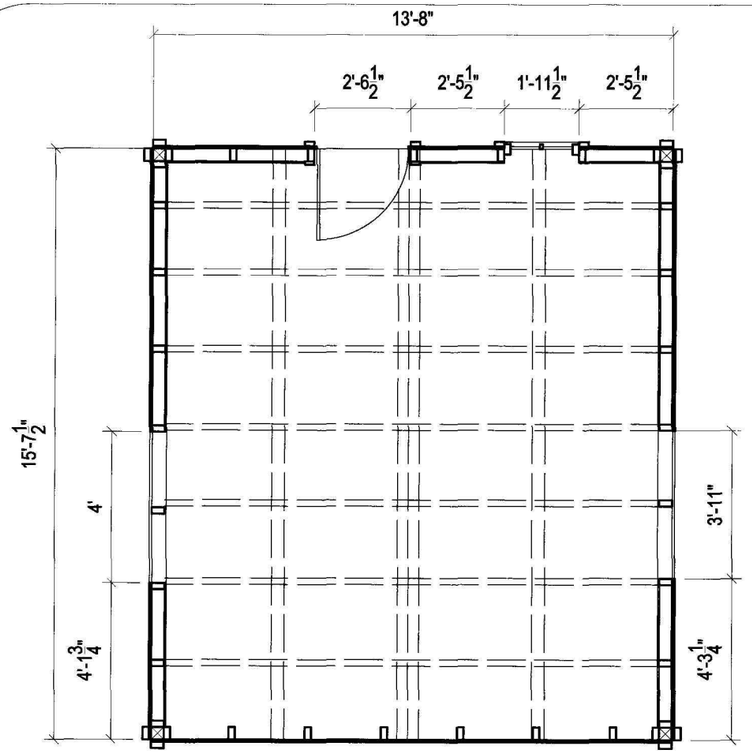
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BATES WELL RANCH

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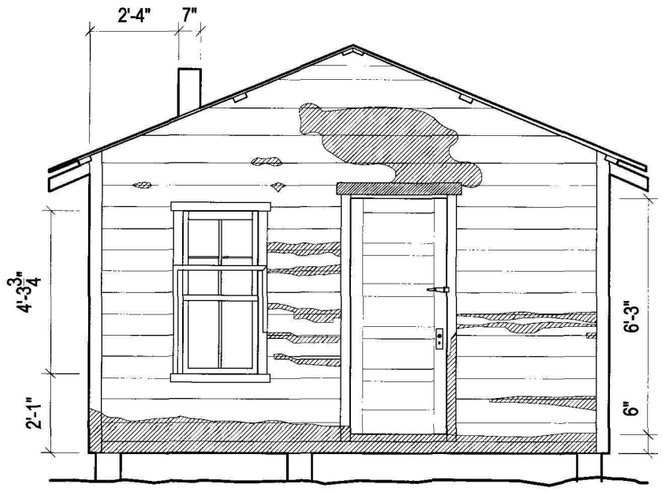
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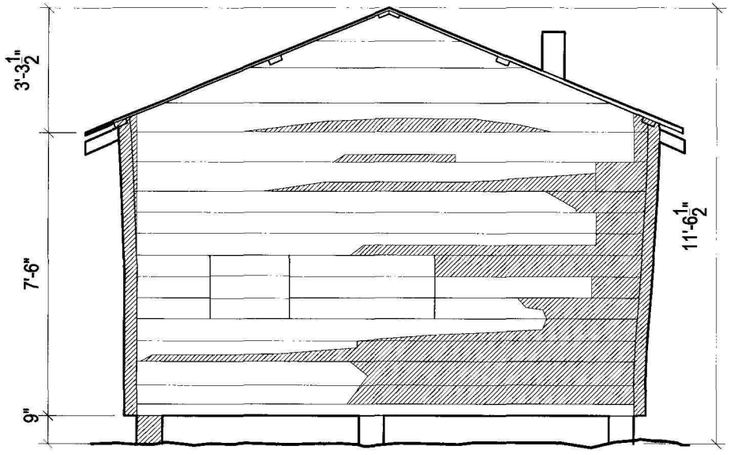
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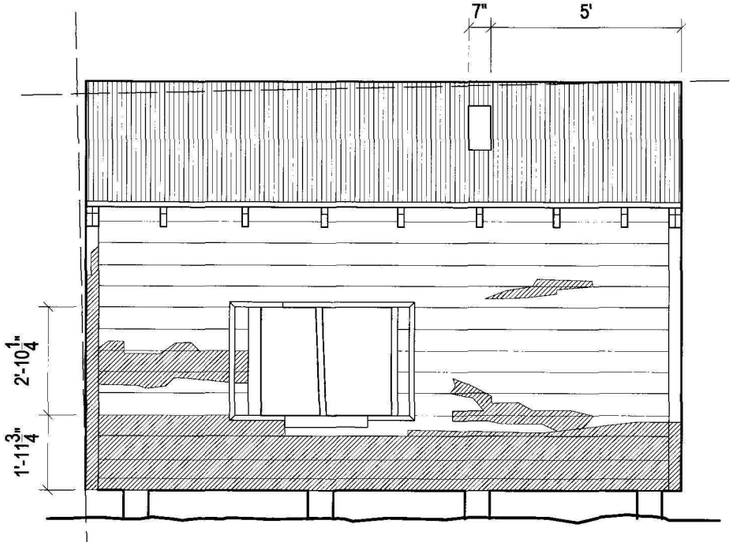
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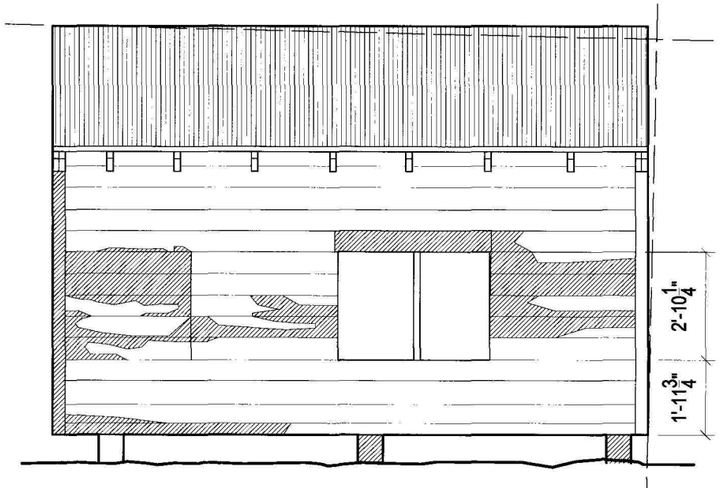
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SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

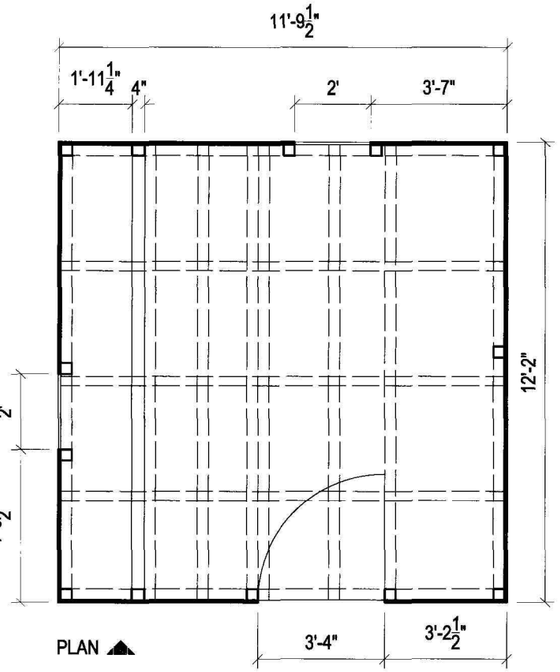
BUNKHOUSE NO. 1

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BATES WELL RANCH
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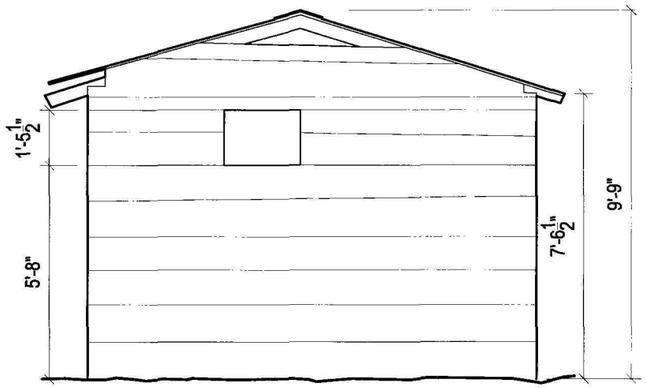
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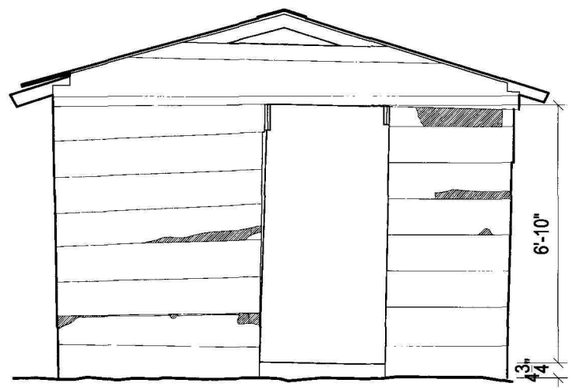
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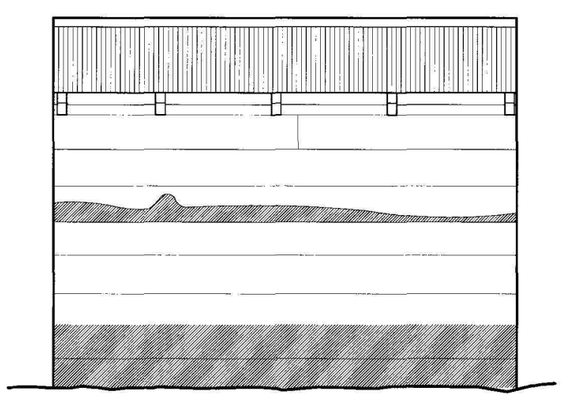
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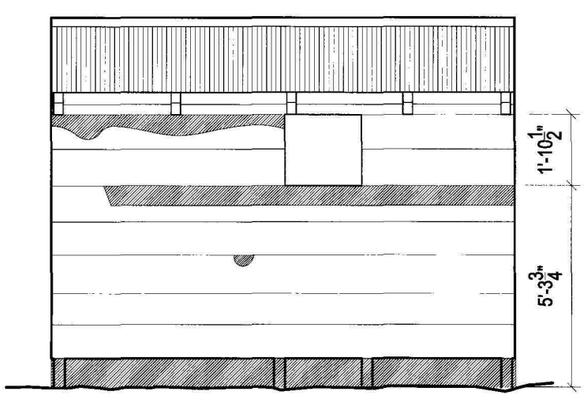
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SOUTH ELEVATION



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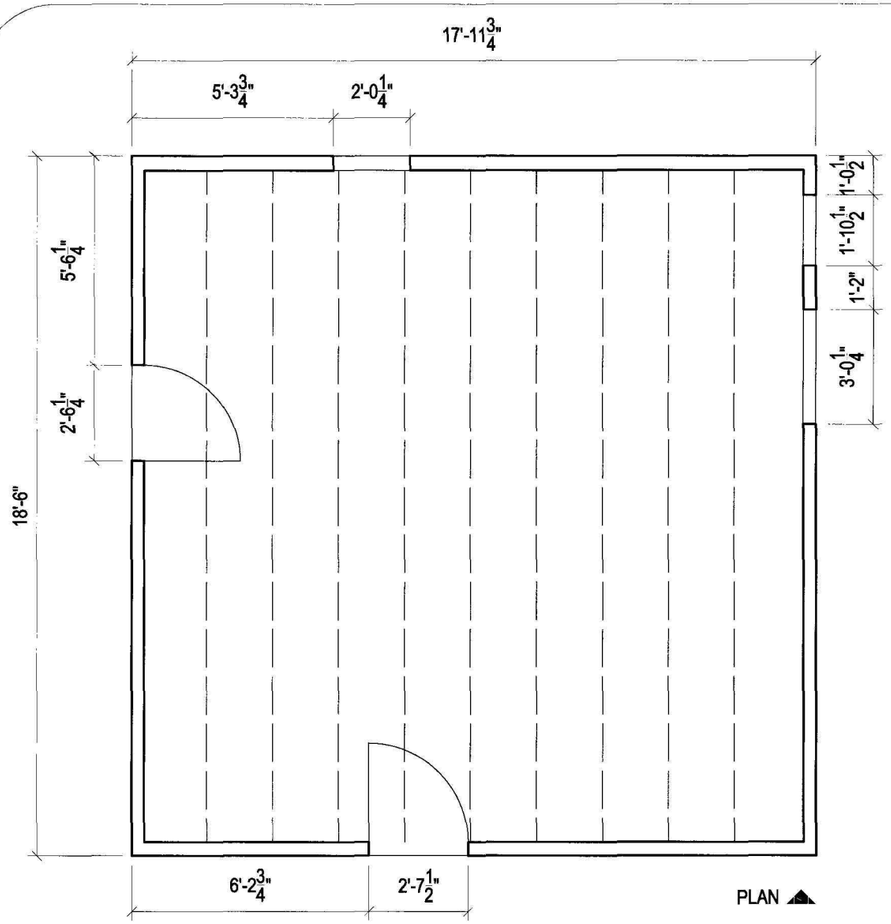
WEST ELEVATION

TACK HOUSE

BUILDING NO. HS01F
BATES WELL RANCH
1/4" = 1'-0"

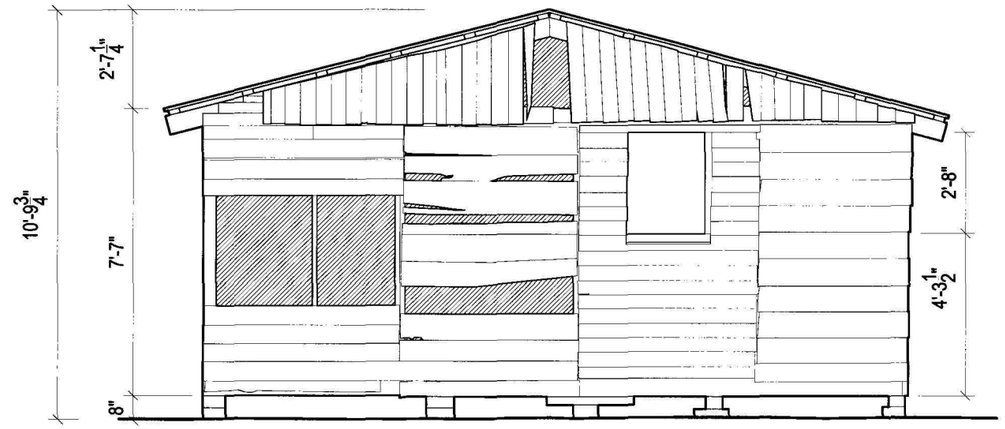
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SHEET NO.
4

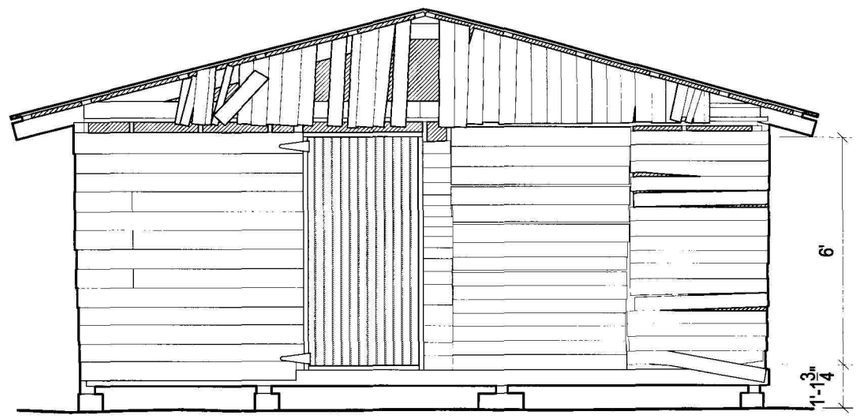


PLAN

CROSS HATCHING INDICATES MISSING OR DAMAGED WOOD CLADDING UNLESS OTHERWISE NOTED



NORTH ELEVATION



SOUTH ELEVATION

HAY BARN / BUNKHOUSE #2

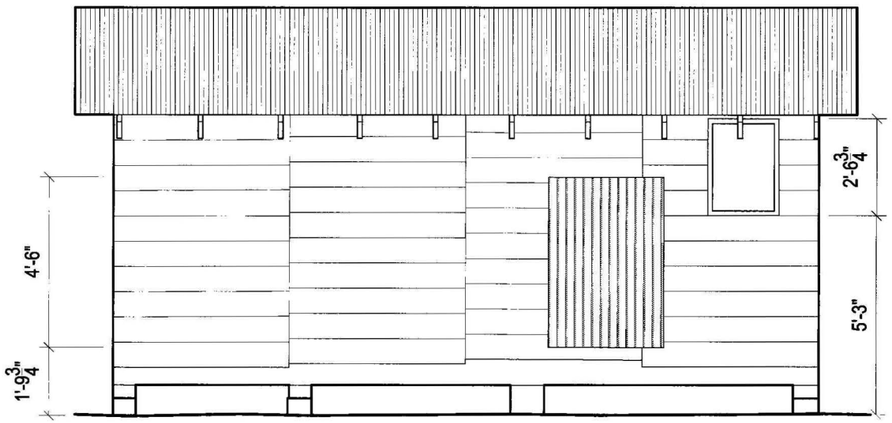
BUILDING NO. HS01D
BATES WELL RANCH

1/4" = 1'-0"

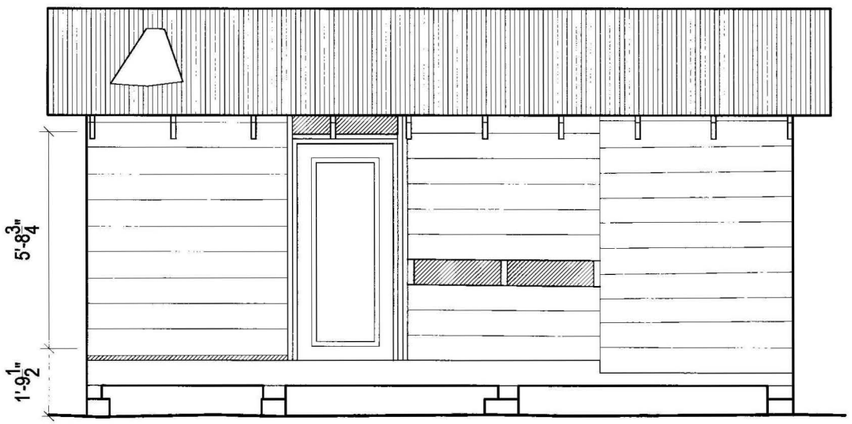
0 1 2 4 FT.

SHEET NO.
5

CROSS HATCHING INDICATES MISSING OR DAMAGED WOOD CLADDING UNLESS OTHERWISE NOTED



EAST ELEVATION



WEST ELEVATION

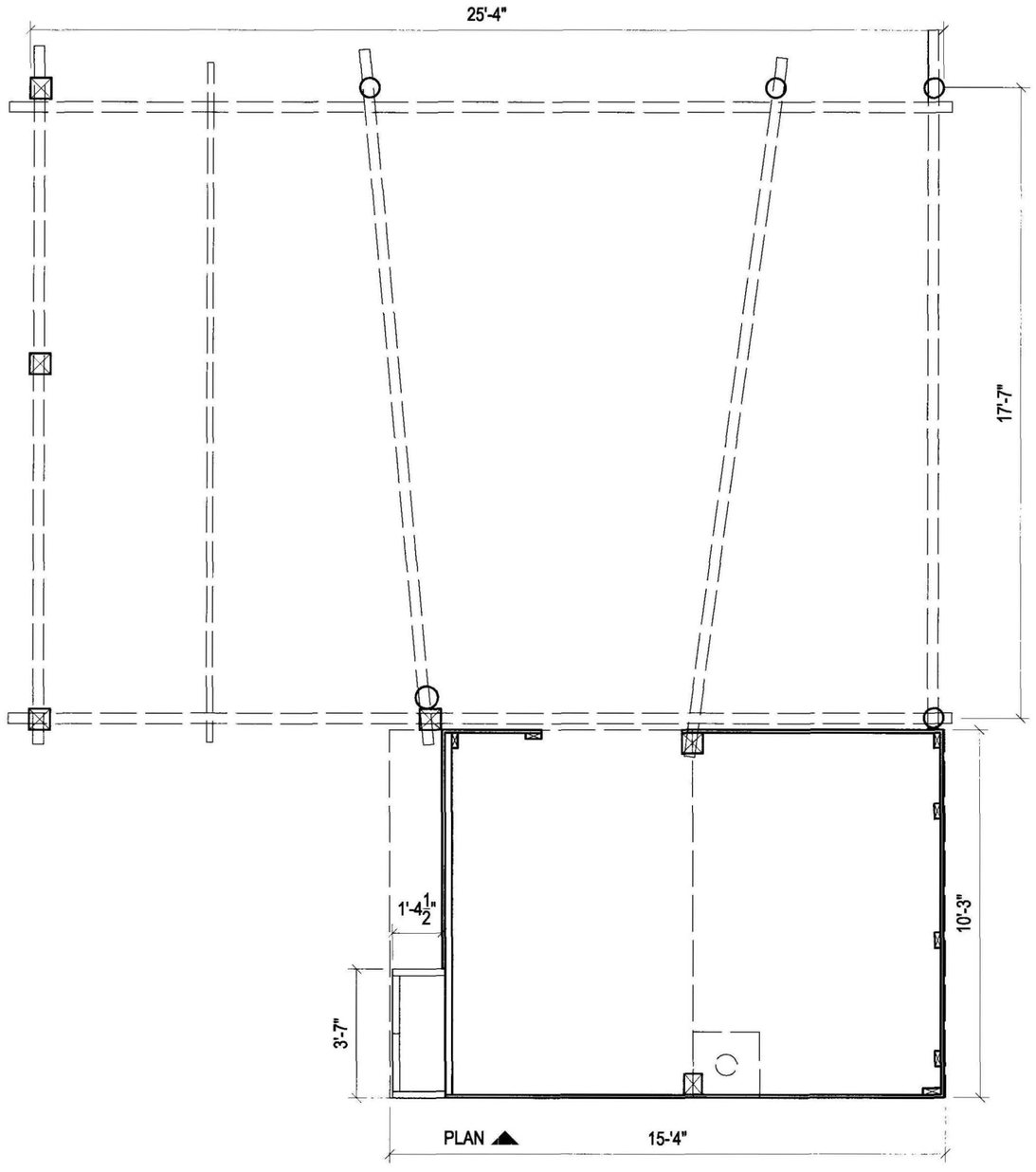
HAY BARN / BUNKHOUSE #2

BUILDING NO. HS01D
BATES WELL RANCH

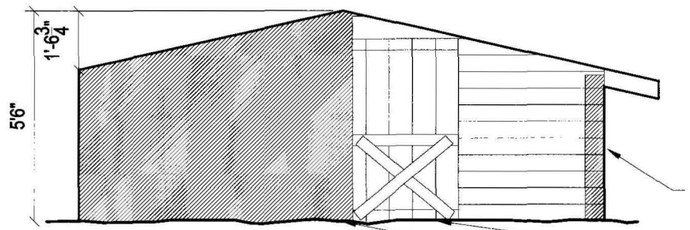
1/4" = 1'-0"

0 1 2 4 FT.

SHEET NO.
6



PLAN



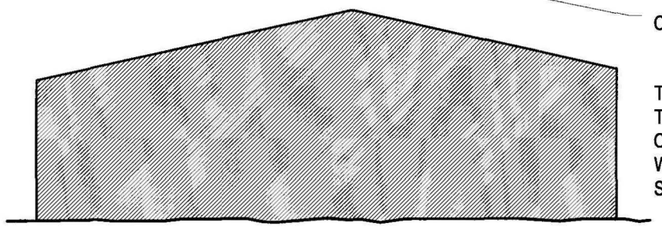
NORTH ELEVATION

CROSS HATCHING INDICATES MISSING OR DAMAGED WOOD CLADDING UNLESS OTHERWISE NOTED

FAILURE OF CORNER POST CAUSING BUILDING TO LIST TO THE RIGHT (WEST)

DOOR OFF HINGES

CORRUGATED STEEL DELAMINATION



SOUTH ELEVATION

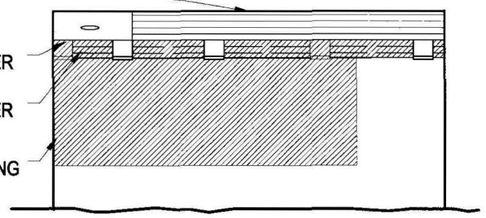
THE SOUTH ELEVATION IS SO DETERIORATED THAT IT IS DIFFICULT TO DETERMINE ITS COMPOSITION. IT APPEARS THAT IT WAS CLAD WITH A COMBINATION OF BOARD AND BATTEN SIDING AND CORRUGATED STEEL.

CEDAR SHAKE ROOF IN ADVANCE STATE OF FAILURE

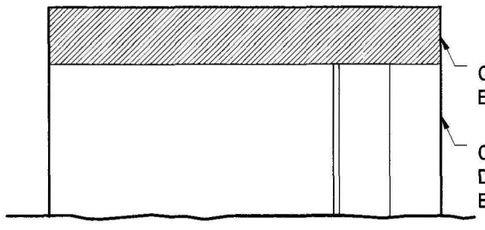
ROTTEN OR MISSING 2 X 6 LUMBER

MISSING 1 X 6 LUMBER

CORRUGATED STEEL DELAMINATING



EAST ELEVATION



COMPLETE FAILURE OF ROOF - SEE EAST ELEVATION FOR DETAILS OF CONSTRUCTION

CORNER HAS ROTTED OUT AT BASE. DIMENSIONAL LUMBER 2 X 16s STANDING UP ON END AND THROUGH BOLTED FOR CONNECTION

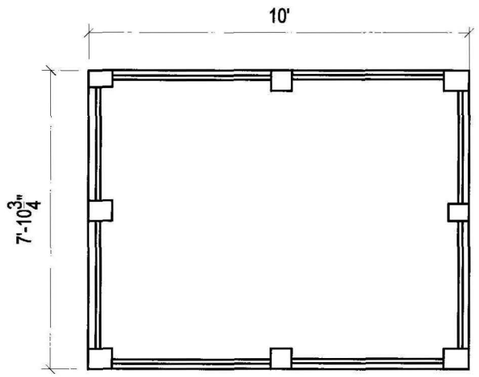
WEST ELEVATION

Blacksmith Shop

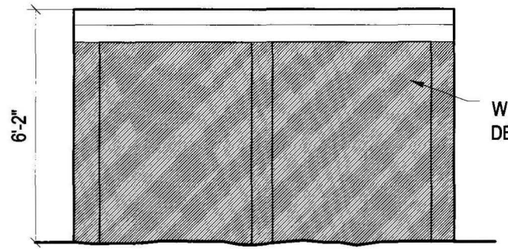
BUILDING NO. HS01C
BATES WELL RANCH
1/4" = 1'-0"

0 1 2 4 FT.

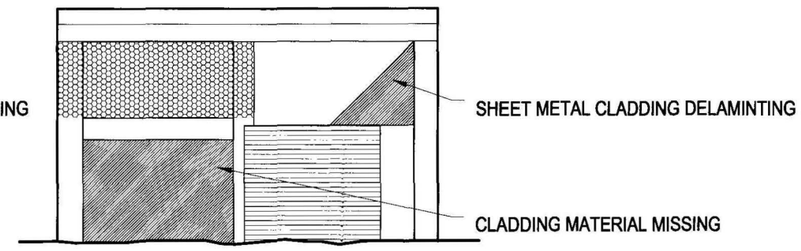
SHEET NO.
7



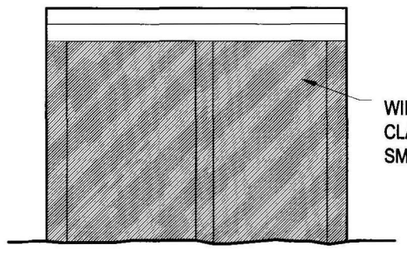
PLAN



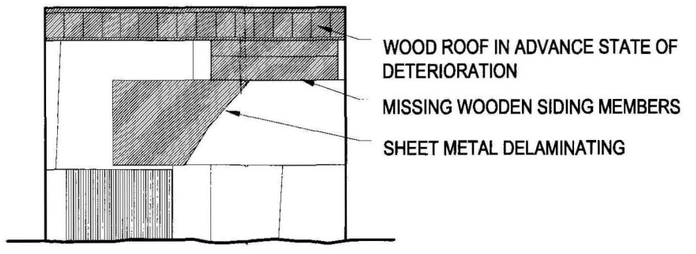
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



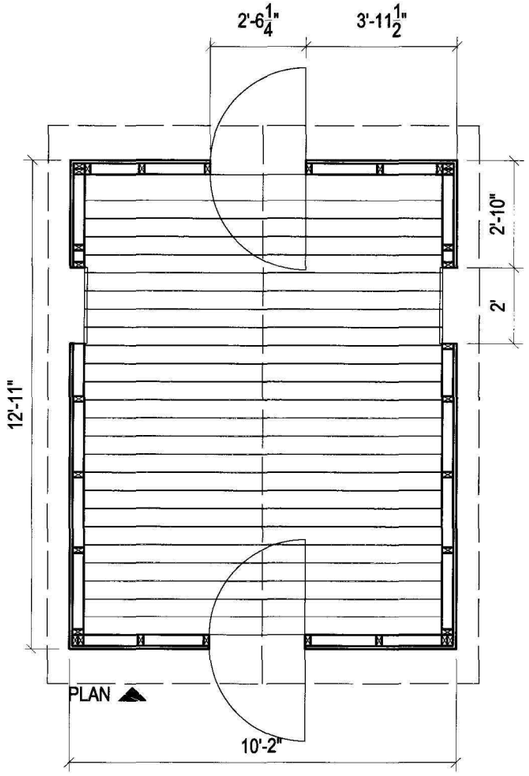
WEST ELEVATION

OCOTILLO SHED

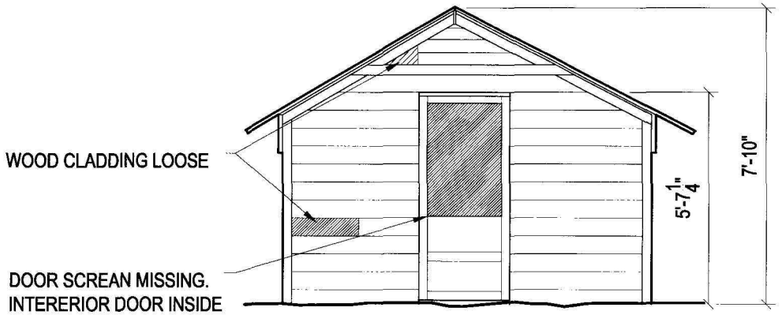
BUILDING NO. HS01G
BATES WELL RANCH
1/4" = 1'-0"

0 1 2 4 FT.

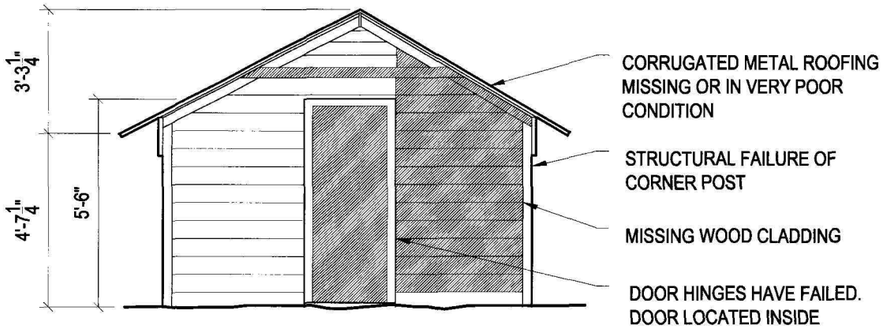
SHEET NO.
8



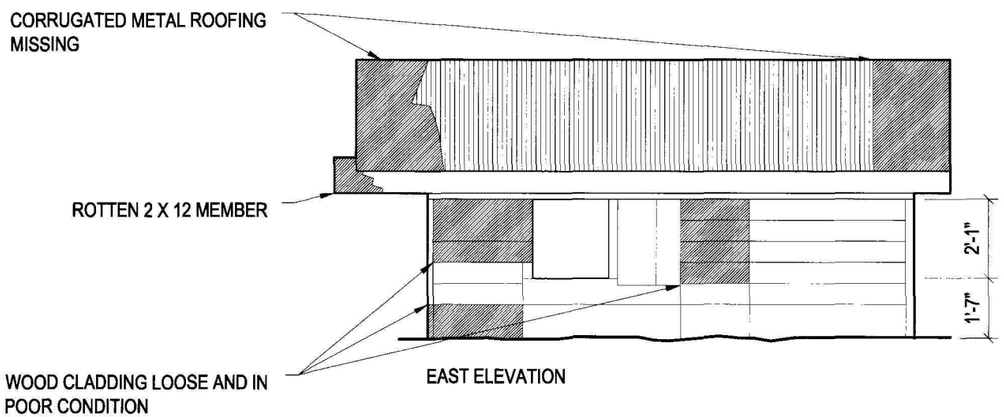
PLAN



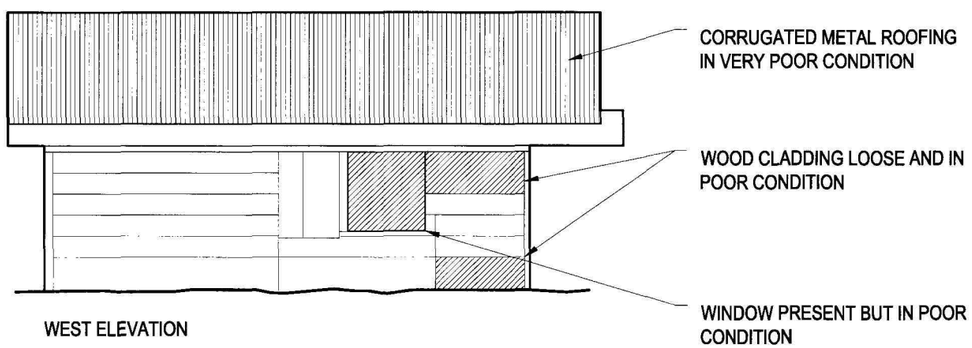
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

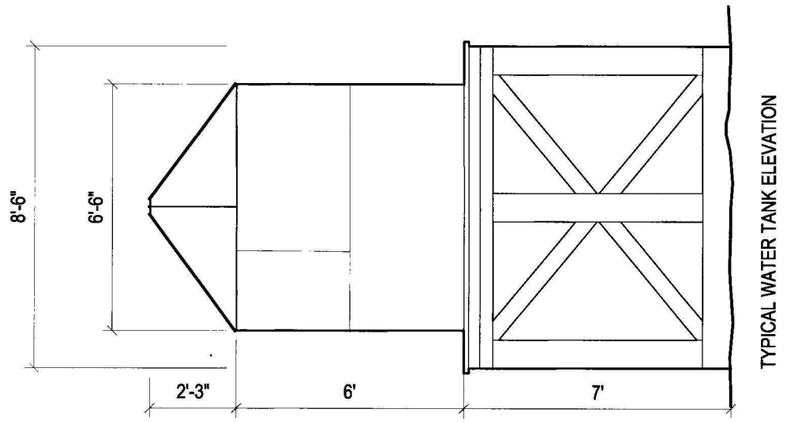
SMALL RESIDENCE

BUILDING NO. HS01B
BATES WELL RANCH

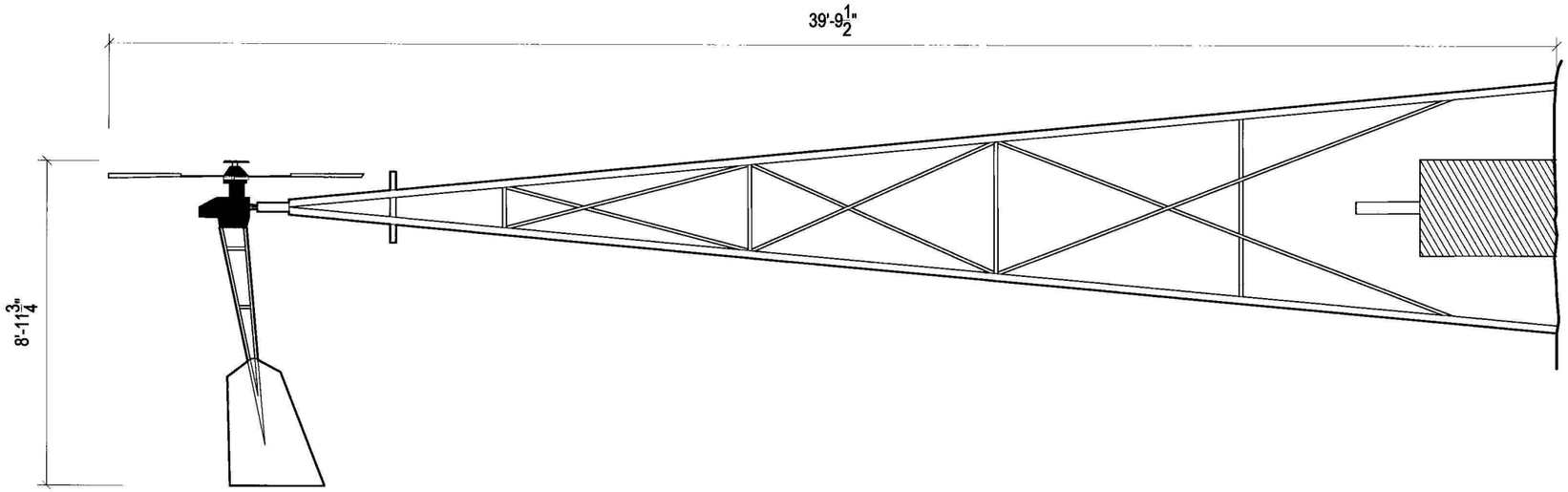
1/4" = 1'-0"

0 1 2 4 FT.

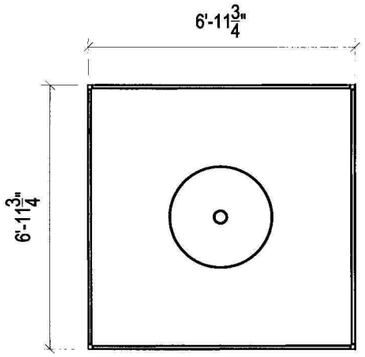
SHEET NO.
9



TYPICAL WATER TANK ELEVATION



TYPICAL WINDMILL ELEVATION



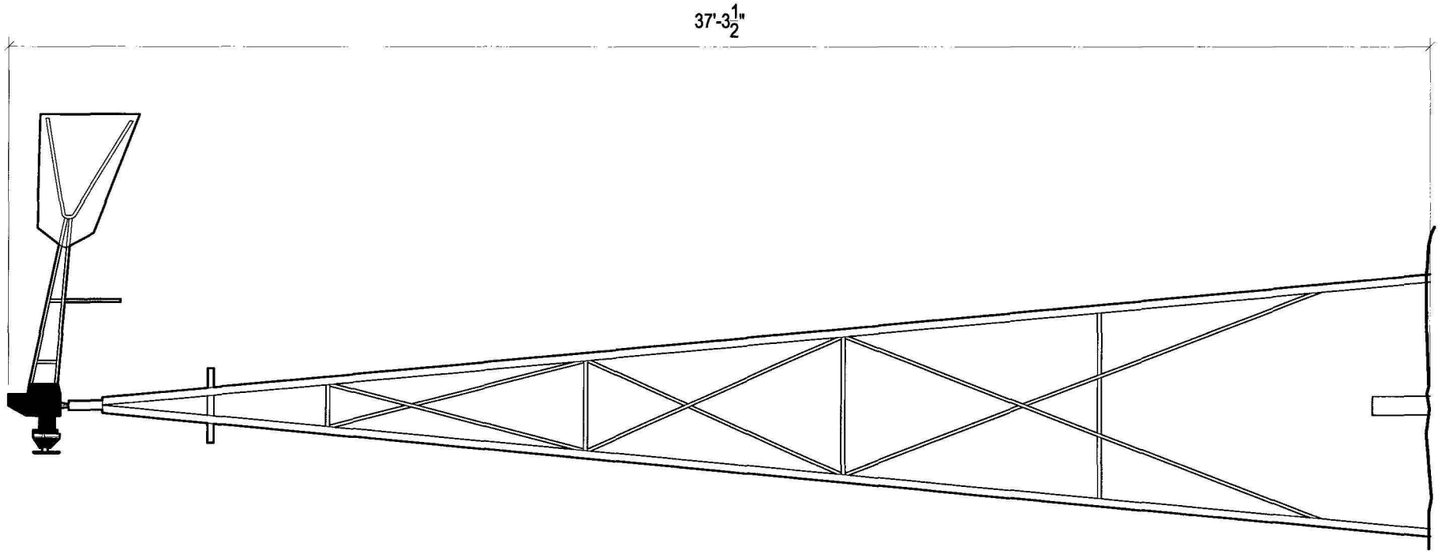
WINDMILL PLAN

WINDMILL NO. 2

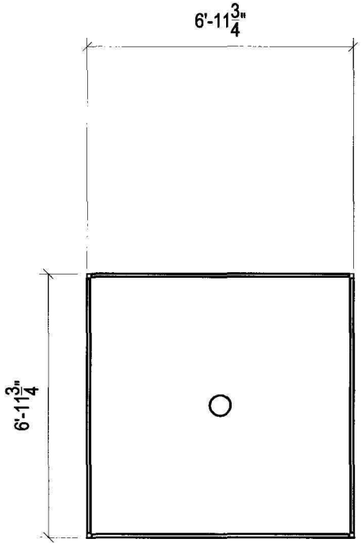
STRUCTURE NO. HS01N
BATES WELL RANCH
1/4" = 1'-0"

0 1 2 4 FT.

SHEET NO.
10



ELEVATION



PLAN

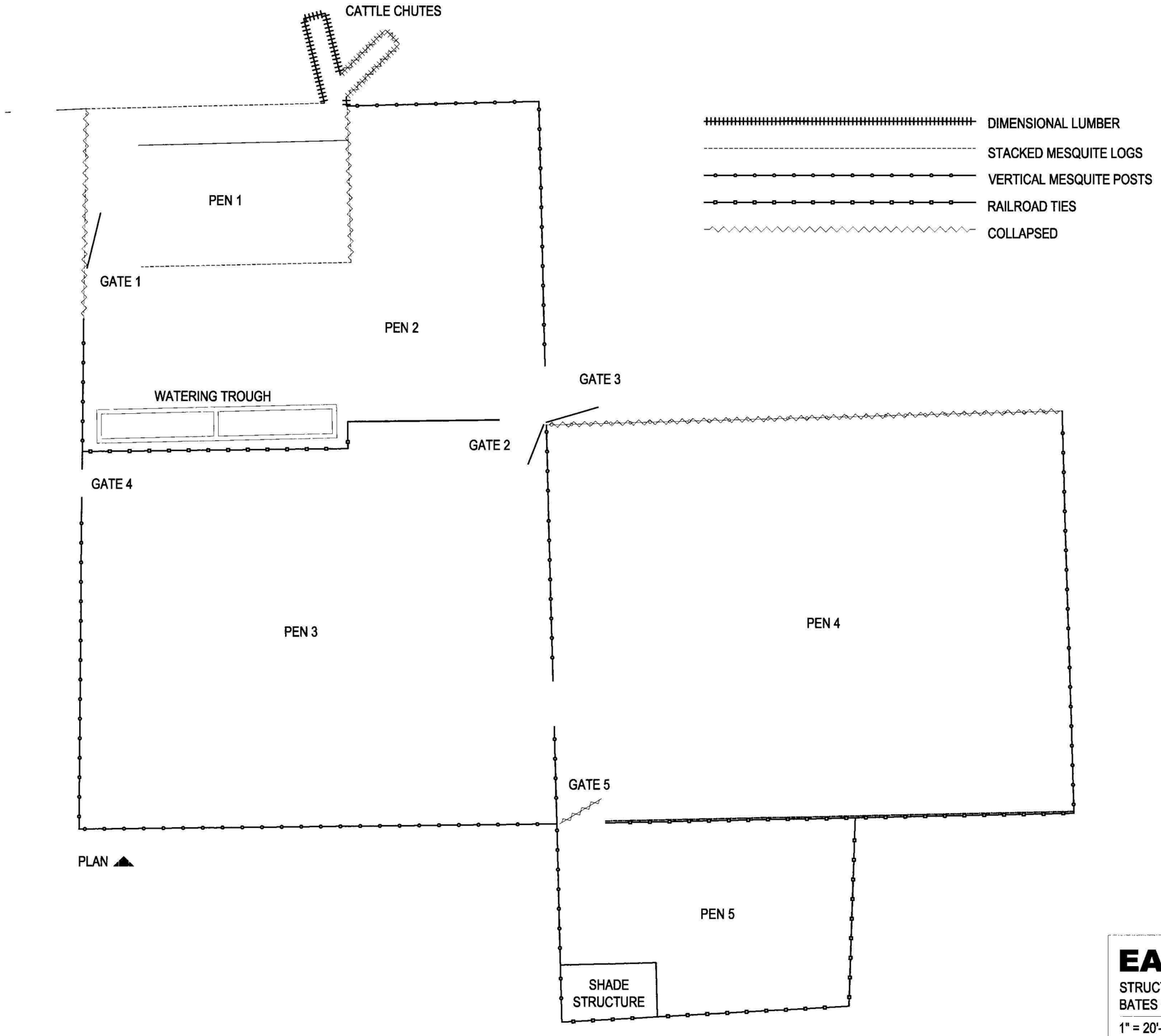
WINDMILL NO. 3

STRUCTURE NO. HS01O
BATES WELL RANCH

1/4" = 1'-0"

0 1 2 4 FT.

SHEET NO.
11



DIMENSIONAL LUMBER

STACKED MESQUITE LOGS

VERTICAL MESQUITE POSTS

RAILROAD TIES

COLLAPSED

EAST CORRAL

STRUCTURE NO. HS01K

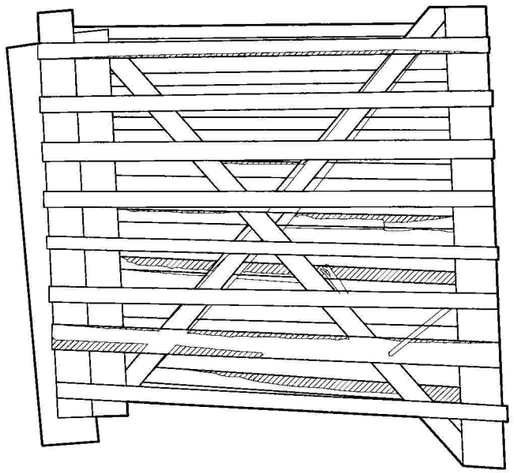
BATES WELL RANCH

1" = 20'-0"

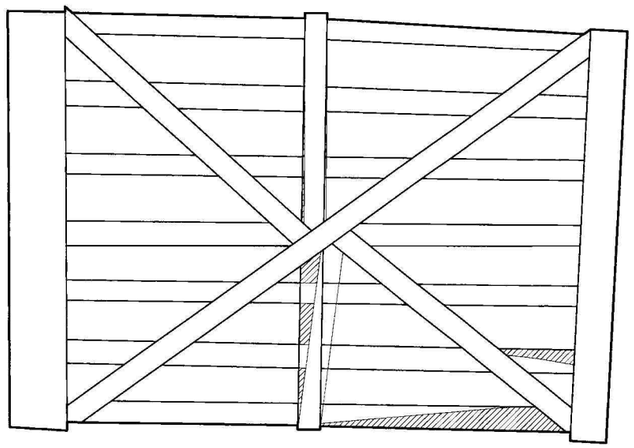
0 5 10 20 FT.

SHEET NO.

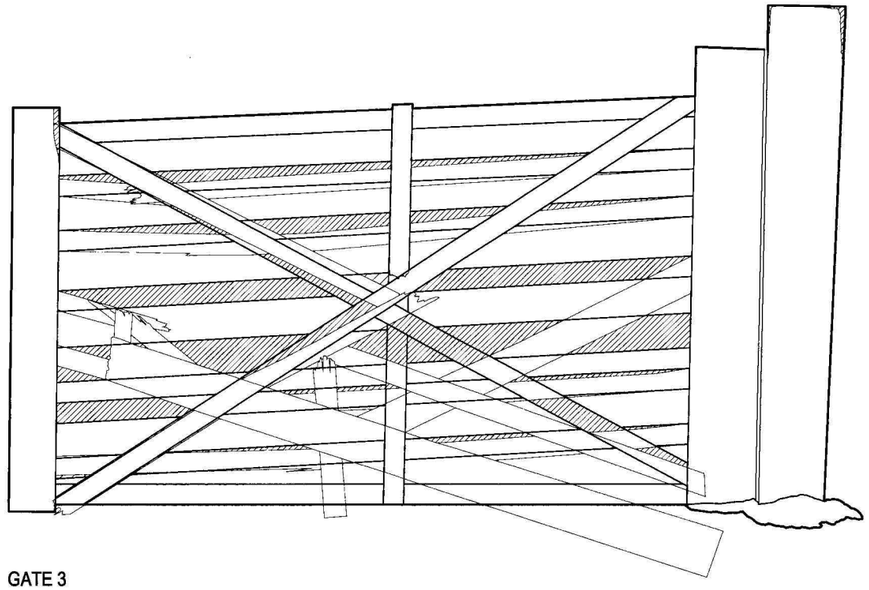
12



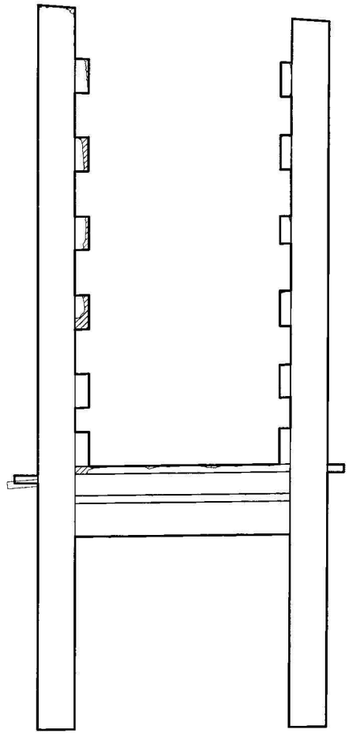
GATE 1



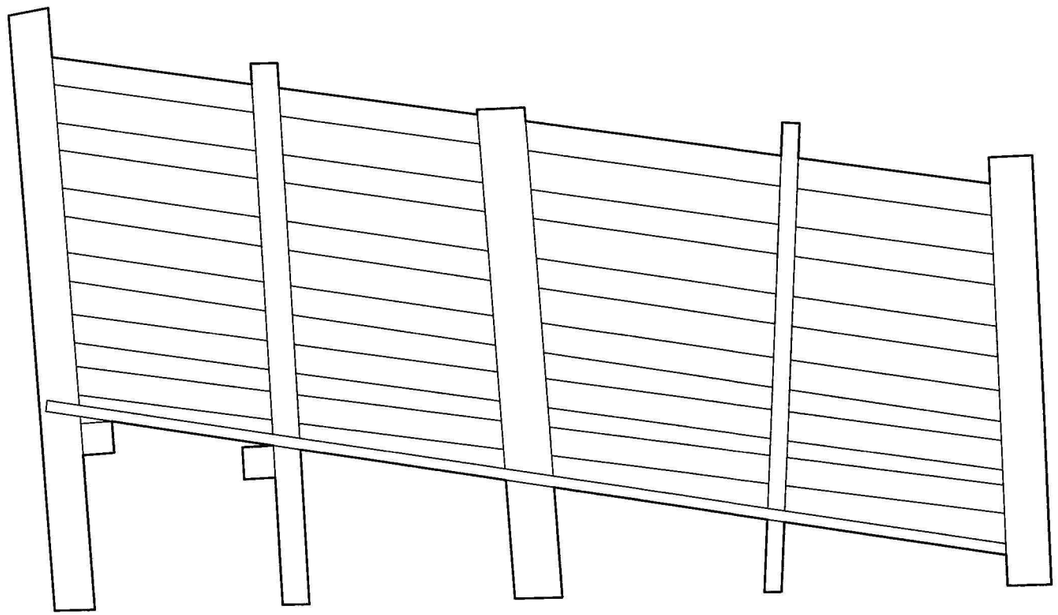
GATE 2



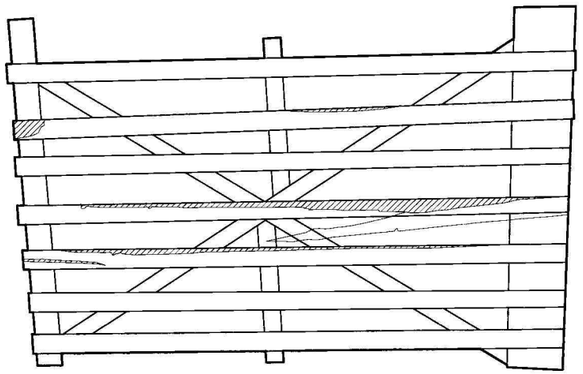
GATE 3



CATTLE CHUTE FRONT ELEVATION



CATTLE CHUTE SIDE ELEVATION



GATE 4

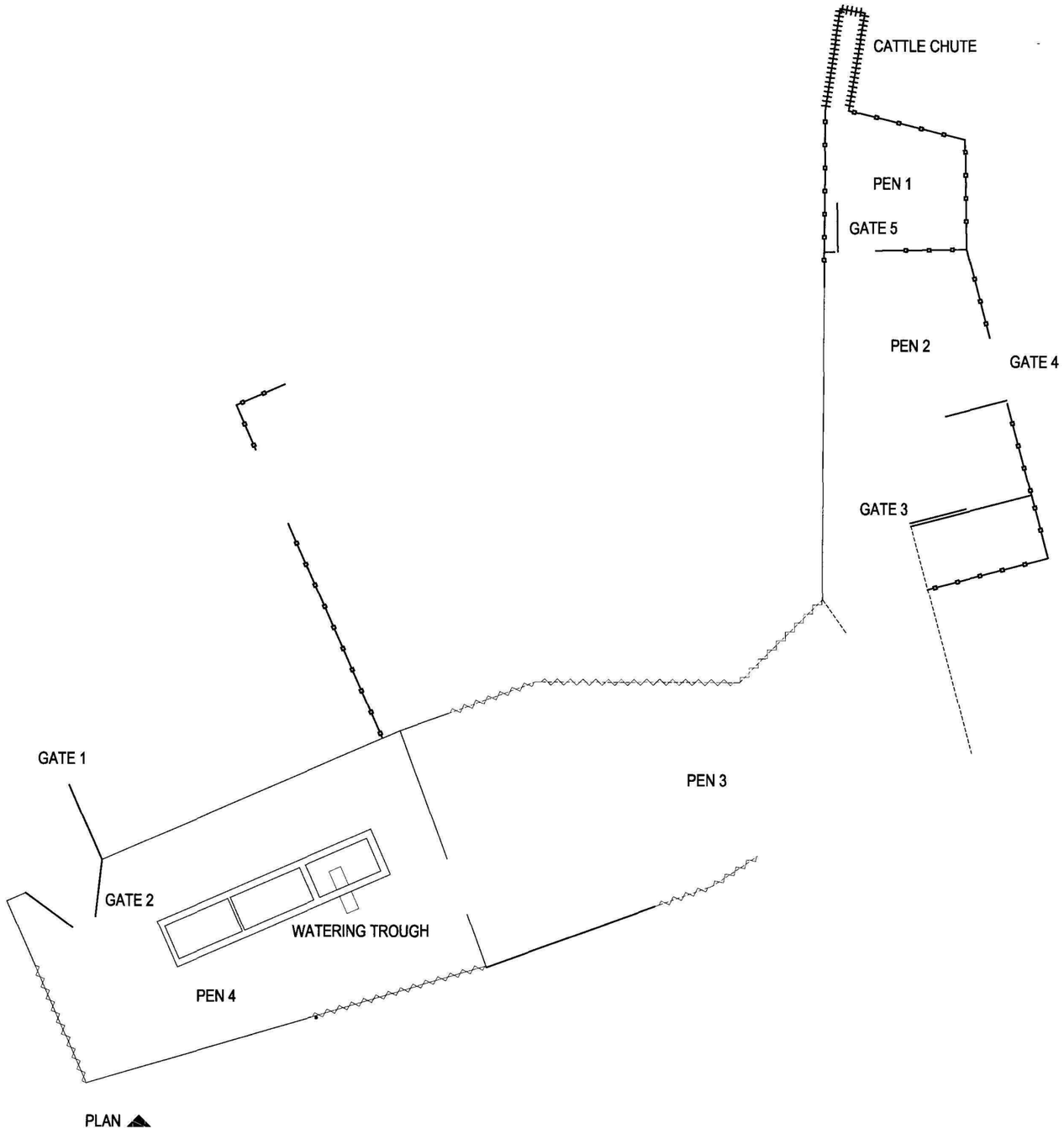
EAST CORRAL FIXTURES

STRUCTURE NO. HS01K
BATES WELL RANCH

1/2" = 1'-0"

0 1 2 FT.

SHEET NO.
13



DIMENSIONAL LUMBER

STACKED MESQUITE LOGS

HORIZONTAL RAILROAD TIES

RAILROAD TIES

COLLAPSED

SOUTH CORRAL

STRUCTURE NO. HS01L

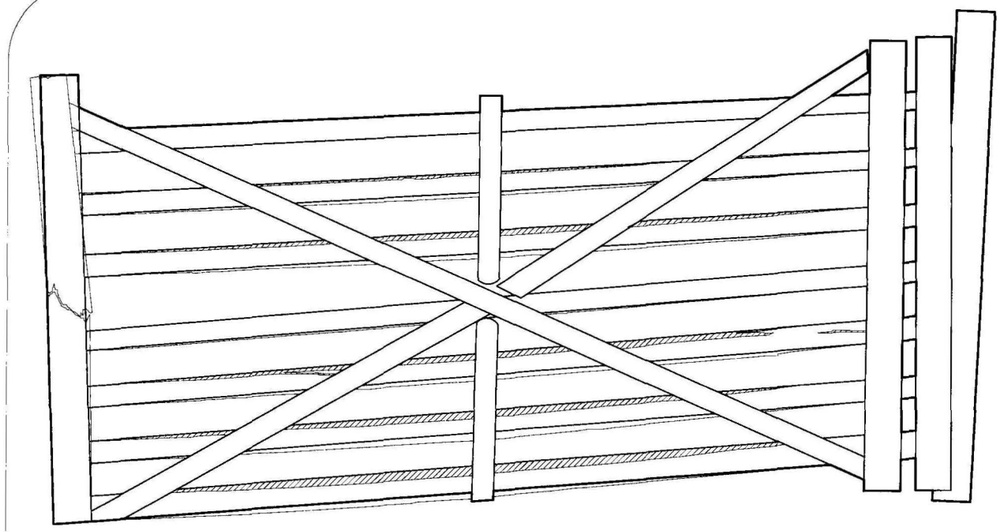
BATES WELL RANCH

1" = 20'-0"

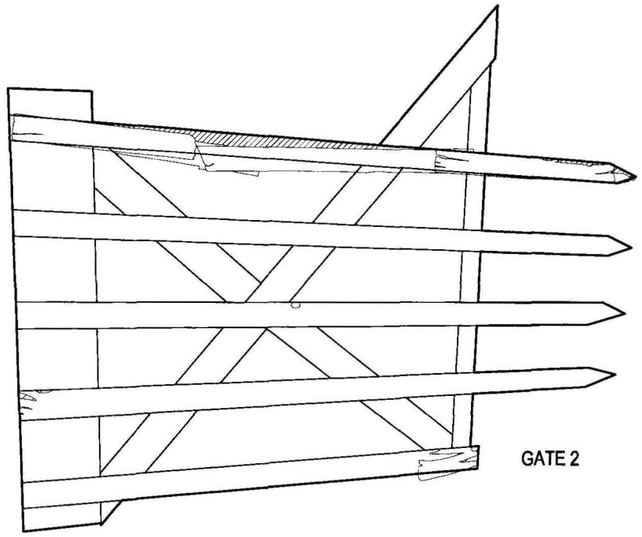
0 5 10 20 FT.

SHEET NO.

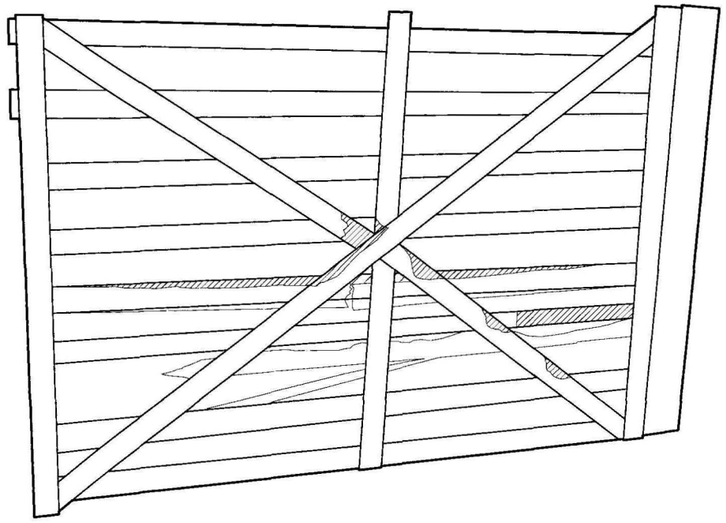
14



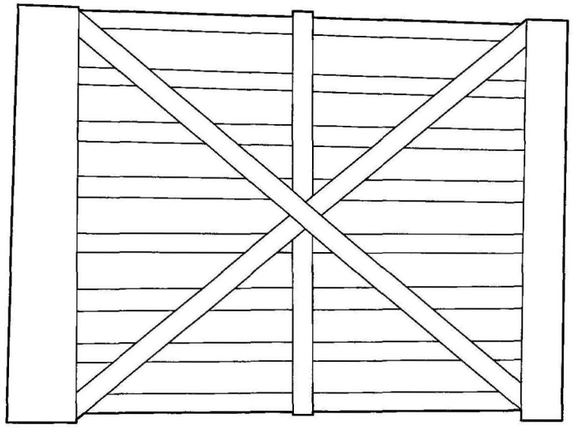
GATE 1



GATE 2

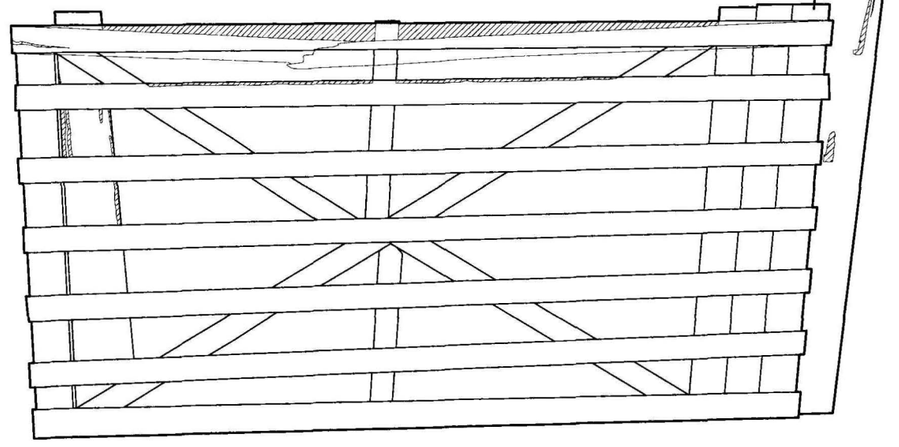


GATE 3

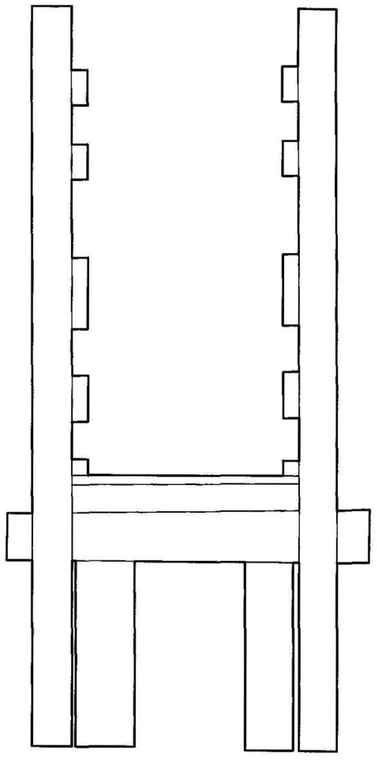


GATE 4

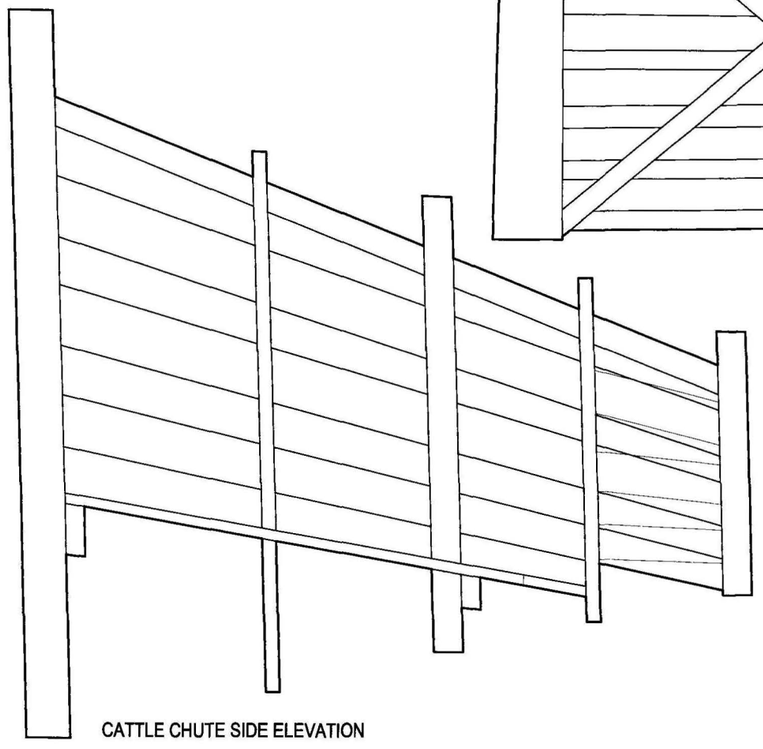




GATE 5



CATTLE CHUTE FRONT ELEVATION



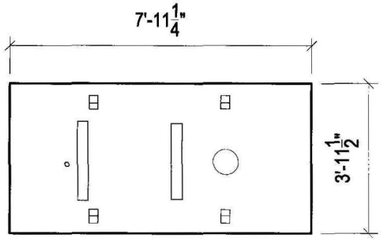
CATTLE CHUTE SIDE ELEVATION

SOUTH CORRAL FIXTURES

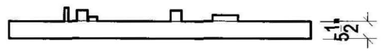
STRUCTURE NO. HS01L
BATES WELL RANCH
1/2" = 1'-0"

0 1 2 FT.

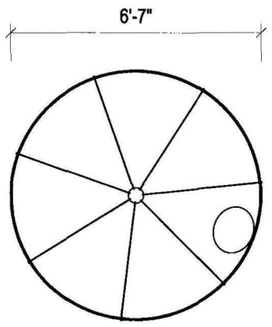
SHEET NO.
15



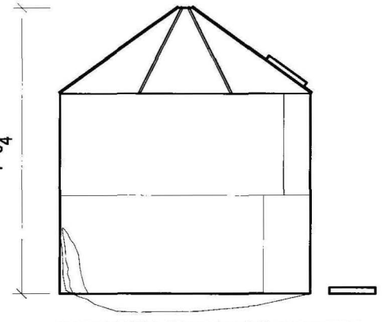
BATES WELL PAD TOP ELEVATION



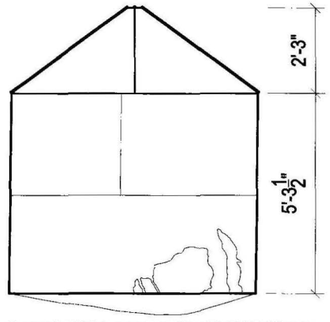
BATES WELL PAD SIDE ELEVATION



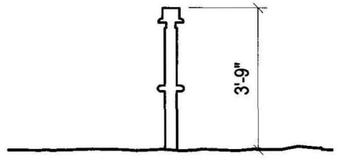
BATES WELL TANK TOP ELEVATION



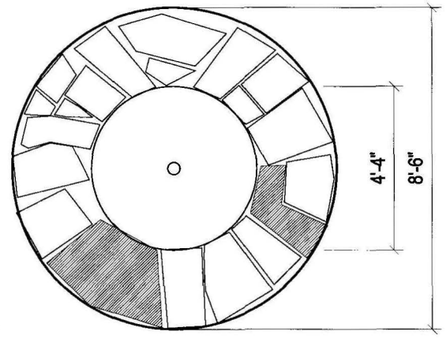
BATES WELL TANK SIDE ELEVATION 1



BATES WELL TANK SIDE ELEVATION 2



ARRASTRA SIDE ELEVATION



ARRASTRA TOP ELEVATION

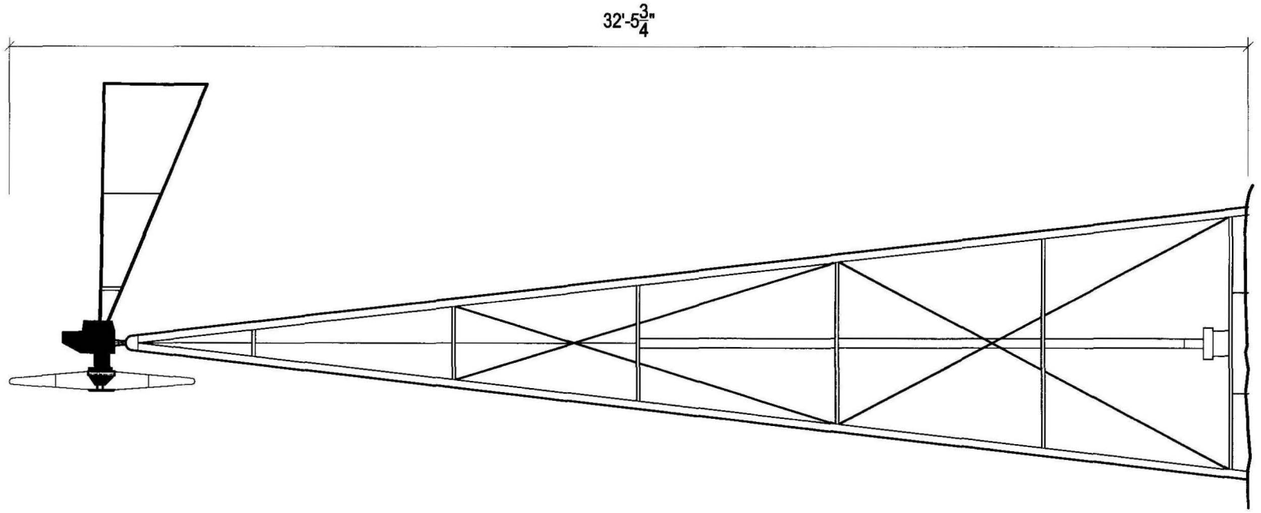
BATES WELL (NON-HISTORIC) ARRASTRA

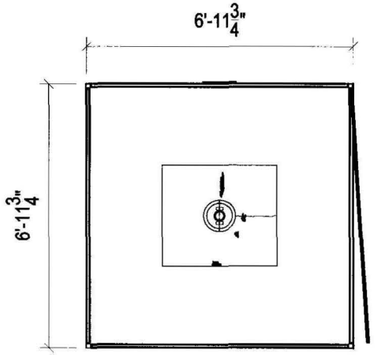
STRUCTURE NOS. HS01P, HS01H
BATES WELL RANCH

1/4" = 1'-0"

0 1 2 4 FT.

SHEET NO.
16





WINDMILL NO. 1

STRUCTURE NO. HS01M
BATES WELL RANCH
1/4" = 1'-0"

0 1 2 4 FT.

SHEET NO.
17