

# THE HISTORICAL ARCHAEOLOGY OF AMERICAN GIRL CANYON, IMPERIAL COUNTY, CALIFORNIA

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## ABSTRACT

Between 1986 and 1991, American Girl Canyon was the focus of extensive archaeological and historical research. This part of the Cargo Muchacho Mountains was the location of the late nineteenth early twentieth century Obregon and Padre-Madre mining settlements and processing areas. As a result of the five-year project, the entire townsite of Obregon and its two associated mills were recorded and excavated. A major result of the study was an understanding that remote company towns of this period were acculturated into the mainstream American lifestyle, despite the harshness and deprivation of the setting. The site area was found eligible for inclusion in the National Register, but could not be preserved because mining development plans required large open pit areas in the canyon.

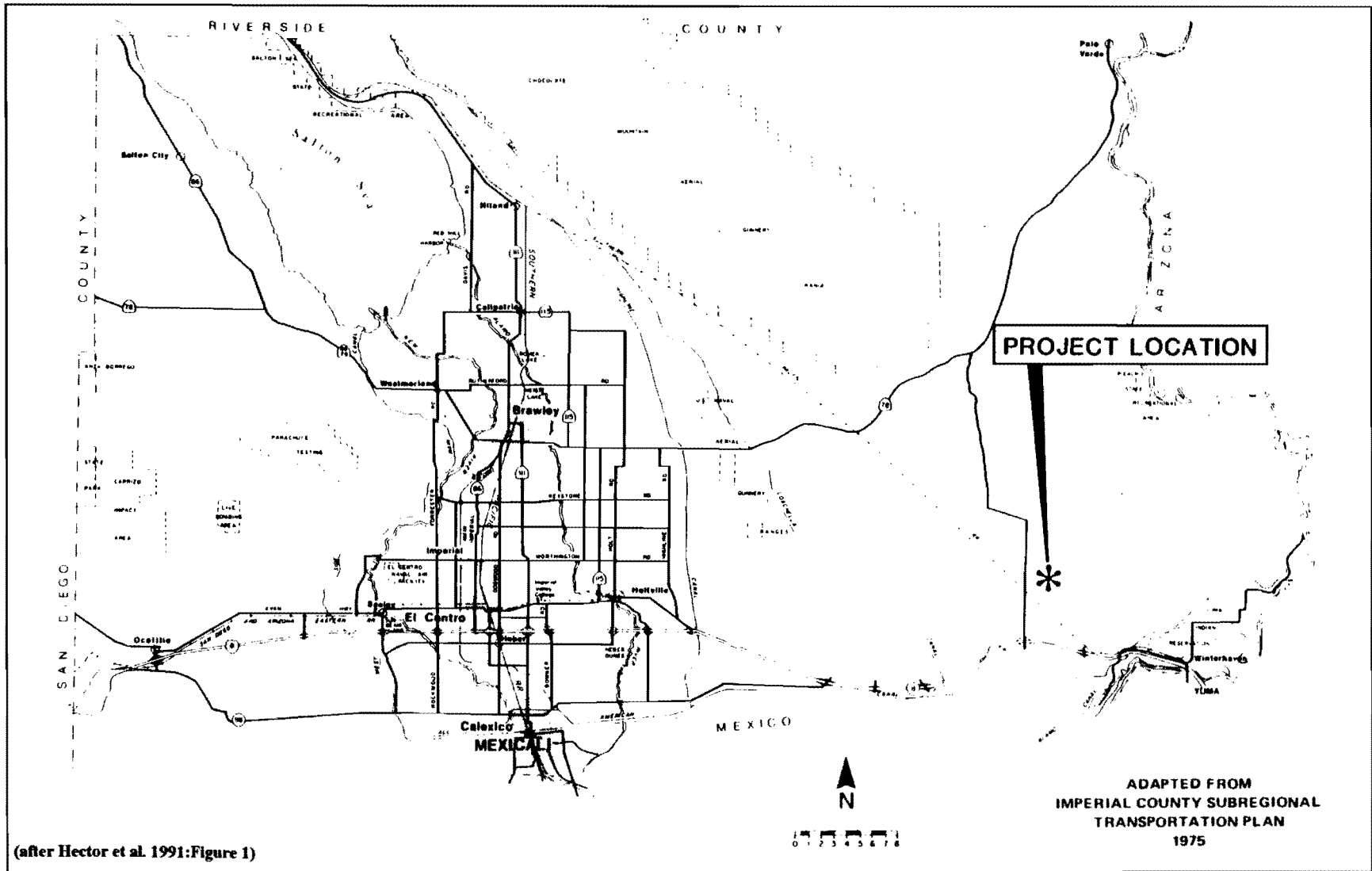
## INTRODUCTION

Historical and archaeological investigations were conducted in American Girl Canyon, in the Cargo Muchacho Mountains near the California-Arizona border, between 1986 and 1991 (Figure 1). The Principal Investigator of the project was the author, with history and historical archaeology conducted by Stephen R. Van Wormer, William R. Manley, and James D. Newland. The work was conducted through RECON, and many staff members participated in the excavations and analysis over the lifetime of this project.

The sites that composed the National Register district were identified and evaluated as part of a project which included an inventory of approximately 2,000 acres in the Cargo Muchacho Mountains, in California but near Yuma, Arizona. The inventory began in 1986 with a survey of a 150-acre project area in a mining district known as Padre-Madre (Hector and Van Wormer 1986).

This historic mining area is south of American Girl Canyon. One historic site, IMP-5300H, was investigated as part of the National Register eligibility evaluation of the Padre-Madre area. Subsequently, a complete survey of the entire proposed mining area was conducted (Hector 1987).

As part of the initial inventory, a number of historic sites and features were recorded. Three of these (IMP-3303H, IMP-5393H, and IMP-5399H) formed a National Register district (Hector 1989). Site IMP-5399H was not investigated as part of this project because it was determined to be located outside the area of impacts associated with the proposed mining project. The sites were found to have historical significance because they retained intact components of the hard rock mining industry dating from the late nineteenth and early twentieth centuries. Since the area was proposed for modern mining activities, a data recovery investigation was required by the Bureau



(after Hector et al. 1991:Figure 1)

Figure 1. Location of the project in Imperial County.

of Land Management.

This paper describes an investigation of features remaining from the American Girl and American Boy Mines, and the miners' community of Obregon (Hector et al. 1991). Remaining collapsed structures and foundations were industrial and residential features representing distinct periods of gold mining. As part of a separate investigation, five graves associated with the town of Obregon were removed from the canyon and reinterred in a nearby cemetery. The research conducted for this project included archaeological excavations and feature documentation, archival research, and oral history.

The sites investigated as part of this study occupied approximately 90 acres in American Girl Canyon. The area is characterized by aridity (less than three inches of rainfall per year) and heat (up to 120 degrees Fahrenheit). American Girl Wash has subterranean water sources that have been tapped by wells. The canyon bottom is an alluvial wash that was sparsely vegetated with willows, desert shrubs, and annuals. The rugged, steep slopes north and south of the canyon contain few plants; small annuals grow in cracks in the rock. At the time of the investigations, the elevations in the project area ranged from 500 to 1300 feet above sea level. However, all this has changed, and the canyon bottom now contains a large open pit mine and a tunnel reaching far below the desert floor.

## THE HISTORY OF AMERICAN GIRL CANYON AND MINING TECHNOLOGY

Extensive historical research on the site and on the evolution and development of mining technology was conducted by Van Wormer, Newland, and Manley as part of this project. The results of this research can only be summarized in this paper.

Spanish explorers were the first to discover gold in the area; in 1776, Father Francisco Garces

discovered gold ore in the Cargo Muchacho Mountains. Between 1862 and 1875, there were small scale prospecting activities in the mountains by American miners, and in 1877 Southern Pacific Railroad completed their line past the mountains to Yuma. During the 1880s, there was a surface mining boom in the Cargo Muchachos. Stamp mills and a water pipeline were constructed. Soon after its invention in Scotland in 1887, the cyanide process was introduced into the United States, and in 1892 the American Girl Mine claim was first recorded by Thomas Wietyer. However, by 1895 the claim was under the control of Zacharias H. Loman of Santa Monica and Thomas Johnson of Hedges. American Girl Mine was grouped with five other mines for management purposes. In 1896, the American Girl shaft was sunk to 200 feet.

The American Girl Mining Company was incorporated in 1896, when ex-California Governor H.H. Markham bought out Loman and Johnson. By that time, a new 20-stamp mill was erected and the cyanide mill was operating. Soon after, in 1899, the American Boy Gold Mining Company was incorporated.

In 1900, a 12-mile pipeline was built to carry water from the Colorado River to run the steam-powered machinery. Gates (Cornish Rolls) as well as a cyanide mill operated at this time. However, in 1906 the American Girl Mine abruptly shut down operations. It was not until 1913 that the area was reopened by the Imperial Reduction Company, refitting the mining operation with the new Hardinge mills. A map drawn in 1914 shows an extensive mining complex at that time.

American Girl mine was completely shut down between 1916 and 1929; in the latter year, a crew was hired to pump out the flooded American Girl mine shaft. The mine operated briefly, but shut down a year later after the crew was unsuccessful in clearing out the shaft with steam powered suction pumps. Finally, in 1935, the shaft was cleared and the mine reopened.

Socorro Mines, Inc., took over the American

Girl Mine in 1936, and installed a modern flotation plant. Other improvements included a diesel powered generator and a gasoline powered compressor. Water was pumped to the mine from a well southwest of the mine. The following year, Socorro changed its name to O'Brien Mines. Mining equipment was improved and the mining camp was expanded into the company town Obregon. A new shaft, the Tybo, was excavated and connected to the American Girl shaft. By 1938, the mine was in full operation, with 110 employees. Obregon School was built that year. The next year, O'Brien Mines consolidated its operations with four other mines into Allied Mines. In August of 1939, Allied Mines shut down the American Girl mining operation and abandoned Obregon.

By 1942, most of the mining equipment and houses had been salvaged from American Girl mine and Obregon. Over the years, little changed, with sporadic occupation and use of the area until recent changes in technology made mining in the Cargo Muchachos lucrative once again.

## THE FEATURES

An important part of this project was the use of low elevation aerial photogrammetry to document the many features and their relationships to one another. Without the use of this technique, significant detail would have been lost, and interpretations would have been impossible. In many cases, individual artifacts, such as tin cans, could be identified from the aerial photos. Each artifact could then be located, mapped, identified, collected, and analyzed as it related to its individual context.

It is not possible in this paper to describe in detail the artifacts and features documented as part of this project. The following paragraphs briefly describe the major features recorded.

### Obregon

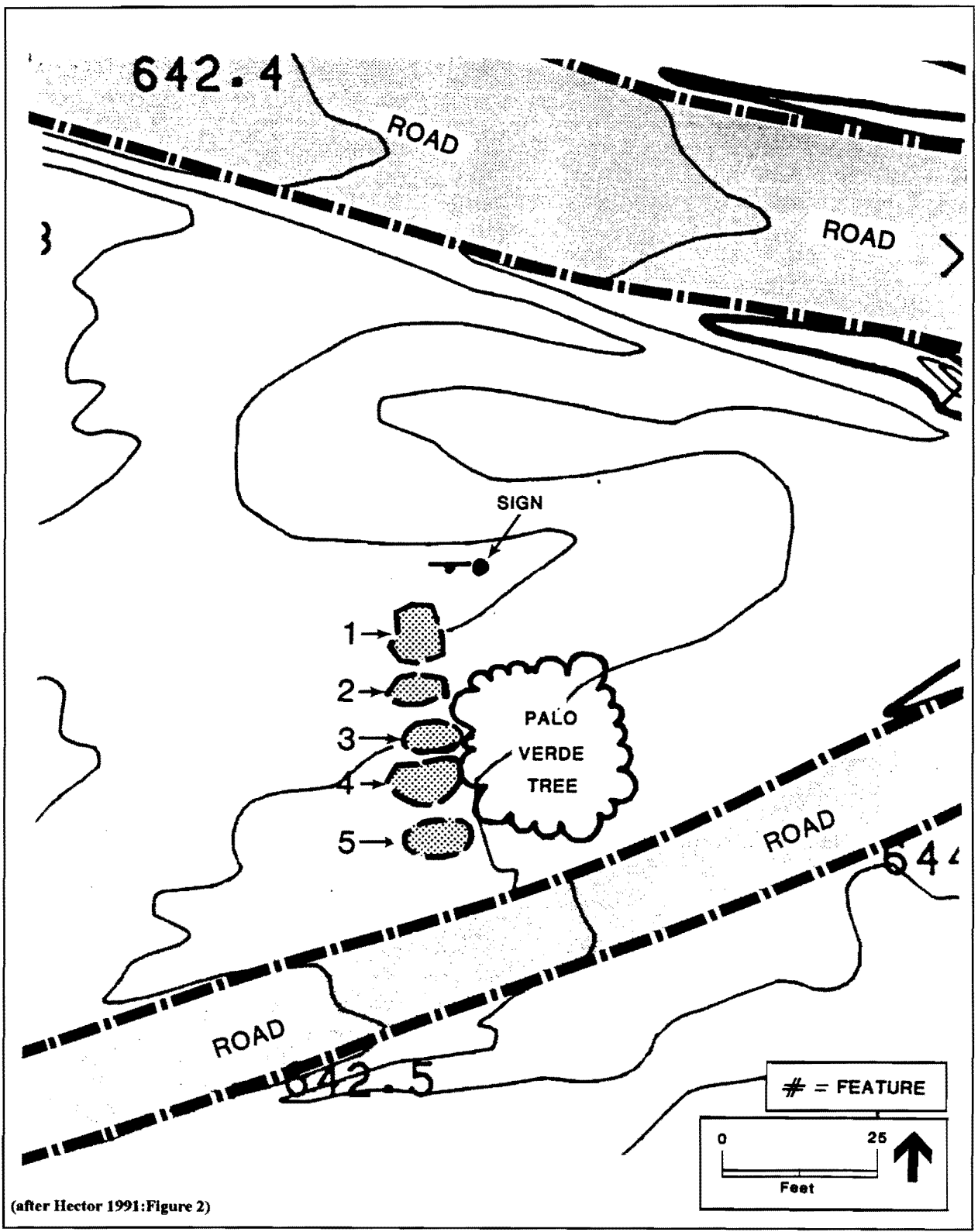
Ten features were excavated and recorded as part of the Obregon townsite. These included

adobe and wooden house ruins. The house sites were located on level pads along the two main streets of the town. In at least one case, the pad contained not a house but a tent site.

One of the features was the town dump. This area was a garbage-filled ravine that was used sporadically into modern times. The Obregon Dump was at the western end of the alluvial fan where the townsite and mines were located. The main part of the dump measured 10 by 30 m, with a small, later dump area to the south. The field strategy was balanced between the need to thoroughly sample the material in the large, sense deposit and the desire to limit collection of repetitive data. To accomplish this, some of the larger items in the dump were analyzed in the field. All excavation units in the dump were dug to sterile gravel, and soils were passed through 1/8th-inch mesh screen.

A town cemetery was the focus of a separate investigation at the end of the project (Figure 2). A posted sign near the cemetery noted a date of 1892 for American Girl Cemetery, and the subsequent excavation and analysis of the site supported this date. The cemetery consisted of five mounds constructed of loose stones gathered locally and piled to approximately one foot in height. The mounds were approximately six feet in length, and the south end of each mound was marked with a small wood cross. Photographs of the cemetery from the 1960s showed that the mounds had a different configuration at that time.

Before the removal of the burials was accomplished, attempts were made to identify descendants and relatives. Because this area was to be completely destroyed by mining, a court order was issued to remove the burials. Notices were placed in newspapers. No interested parties came forward. A local resident related a story that the burials represented a family living in Obregon who had dined on cabbage one night, and allowed the cabbage to sit overnight in its metal pot. Upon eating the leftover cabbage the following morning, the family became ill and all died, apparently the victims of lead poisoning from metal leached from



(after Hector 1991:Figure 2)

Figure 2. Site plan of Obregon cemetery.

the pot. No evidence to support this story was found during excavation and analysis.

Removal of the burials was accomplished in 1989. Analysis of the materials was done on site, since the remains were to be immediately reburied. The human bones were identified and described by Dayle Cheever.

Burial 1. This burial had been disturbed. Bone fragments, florists' wire, and buttons were found. The individual was a juvenile, between three and four years of age. A femur fragment, carpals, and tarsals were found intermixed with fragments of redwood coffin, wire, and cloth. A safety pin with cloth covering and two small shell buttons were found. The small buttons were probably from a dress buttoning in the back; therefore, the burial was tentatively identified as a female.

Burial 2. This burial was undisturbed. The individual was buried in a traditional hexagonal redwood coffin with a domed lid, which had collapsed into the box. Based on the dental characteristics of the burial, the individual was approximately five years old at the time of death. Based on the pelvis, the individual was identified as a female. Cloth-covered safety pins and straight pins covered with knit fabric were found on the lower half of the body. Red twill ribbons were also found. There were no signs of trauma, although a malformed mandible would have caused trouble for this person in adulthood.

Burial 3. This unusual burial consisted of two nesting boxes over a small mound of cremated remains. The top of the inner coffin had well-preserved ribbon and paper fragments. Four teeth were recovered from the ash, and analysis of these indicated that the individual was less than four years old.

Burial 4. This burial was a well-preserved redwood coffin holding an infant approximately nine months old at the time of death (Figure 3). An elaborate floral arrangement was placed on top of the deceased at the time of burial. Fragmentary traces of fabric indicated that the infant wore a cap

and a long gown. Gender could not be identified.

Burial 5. The human remains found in this coffin were from a newborn. Plain-weave cloth fragments were found, indicating a burial cap and gown. The bones were fragile and not well-preserved.

Because of the difference in styles of coffins and depths of the burials, it is unlikely that these five children were buried at the same time. However, similarities in burial attire and accompanying memorial materials indicated that they died during the end of the nineteenth century.

Funeral customs of the late nineteenth century Victorians represented a general pattern of solemnity and formality that has been characterized as morbid romanticism (Habenstein and Lamers 1977; Morley 1971). Before 1880, the process of death and burial was a family matter, and the deceased was wrapped in a shroud and placed in a simple box. With the arrival of industrialization and mass culture during the late nineteenth century, ready-made coffins and memorial artifacts were standardized and available throughout the country. The trend shifted to romanticize death, particularly for children. Children were buried in their nightclothes in coffins made to resemble sleeping bowers. As typical children's burials of the Victorian period, the burials in Obregon fit the stereotype. It was not clear why the five children were buried so close to town, while other town occupants were buried in the Ogilby cemetery at the mouth of American Girl Canyon. It was also not possible to identify the ethnicity of the remains. No evidence was found to assign the children to a particular culture. However, the trend to cultural uniformity was common during the late Victorian period, especially in burial customs.

#### Mill 1

Mill 1 contained many components, including the Hoist House, concrete slabs for equipment, the mine shaft itself, the Boiler area, the Supply House, the Blacksmith Shop, the Office, the Cook House, and the Assay House (Figure 4). A map of

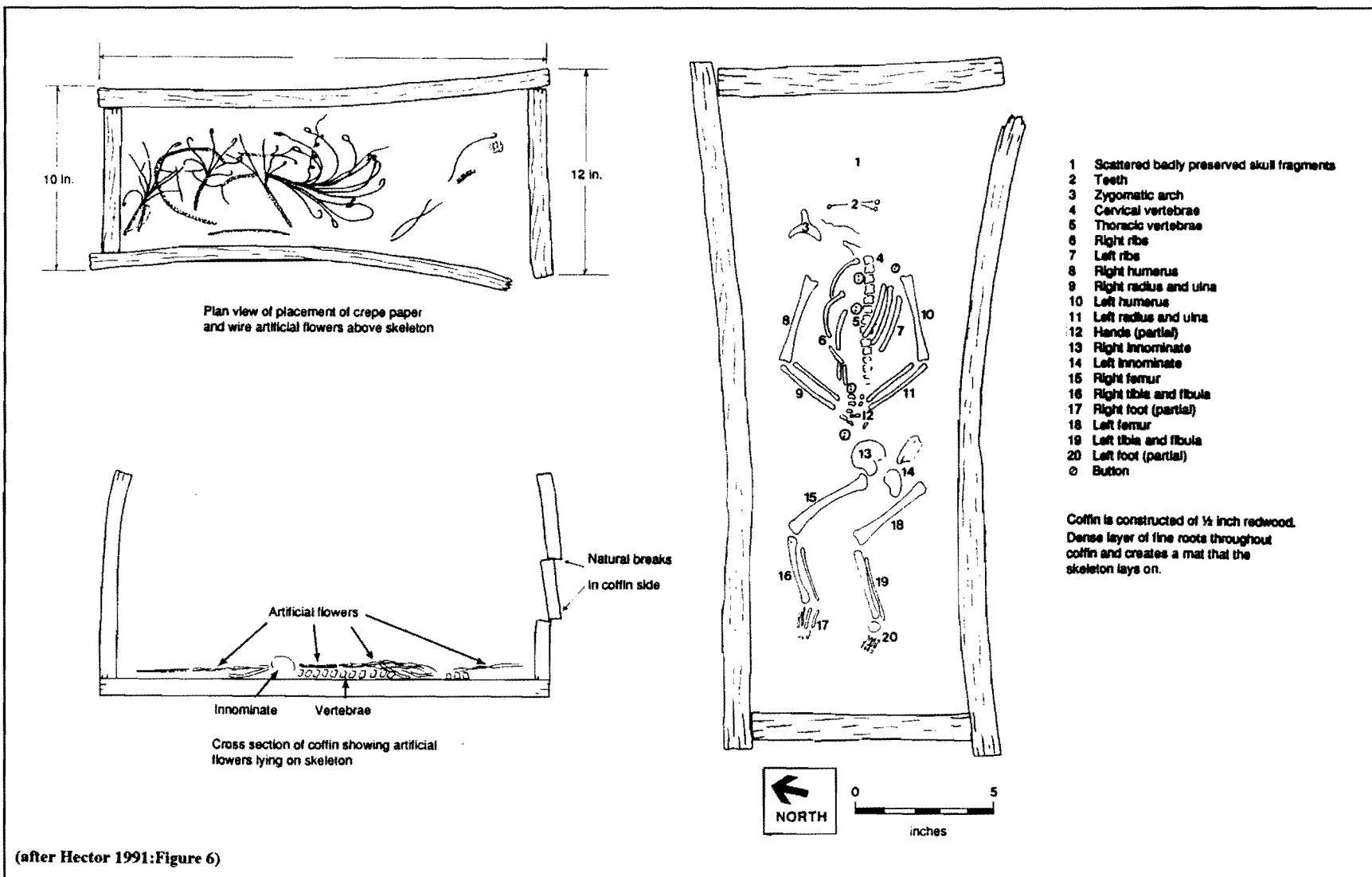


Figure 3. Obregon cemetery, Burial 4.

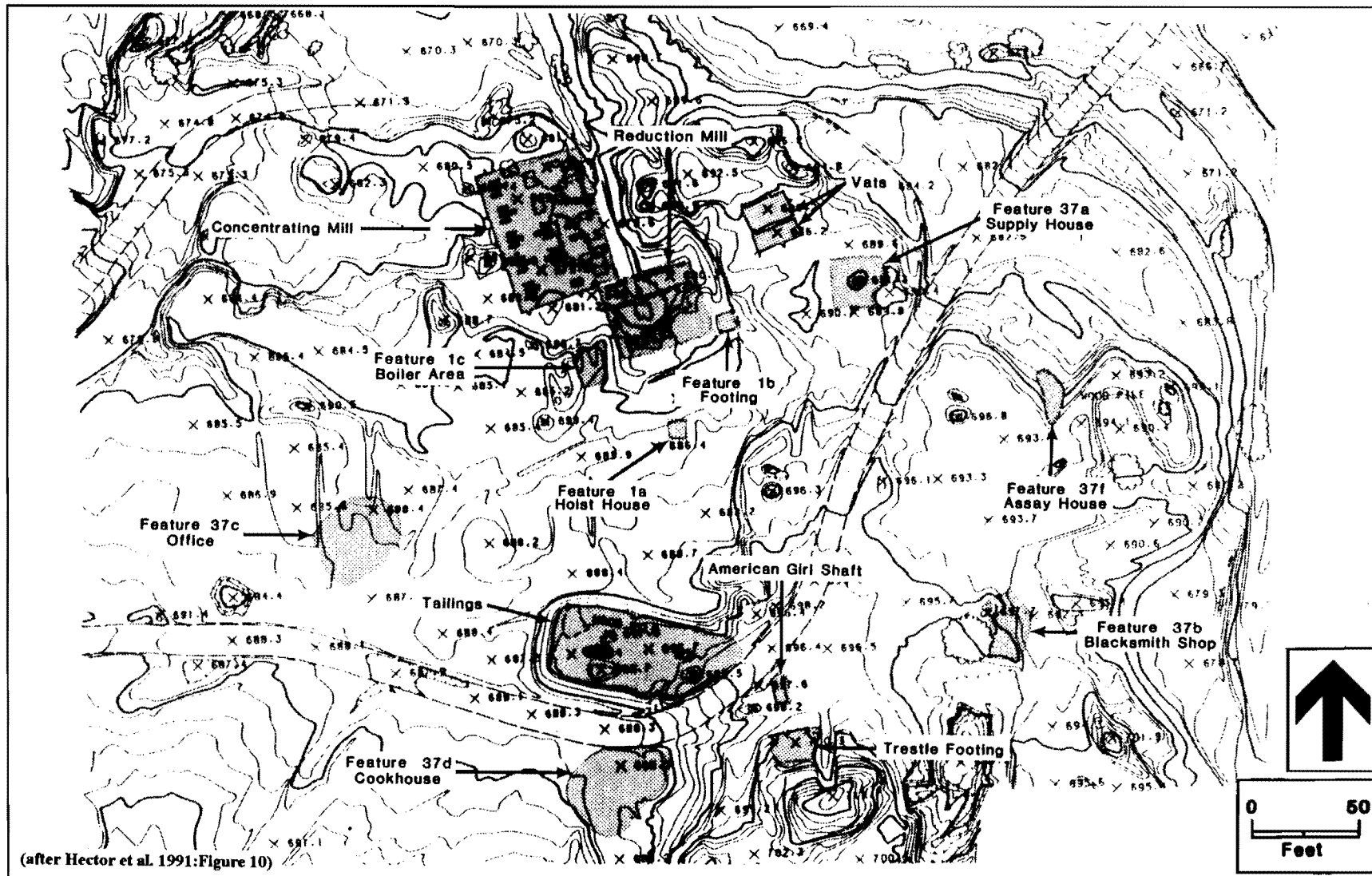


Figure 4. American Girl, features in Mill I area.



the site in 1914 was critical in identifying some of these areas.

The Hoist House was represented by a concrete slab located between the American Girl Mine shaft and the Mill 1 footings. A soil layer containing oil and gravel was excavated and screened. The slab had raised portions and large threaded bolts where the hoist structure was attached. Scattered around the feature were round-head nails, bricks, window glass, and metal hardware.

The Boiler was located inside small adobe structures. Excavation revealed a small smelting oven. Fire bricks and slag were noted. A large amount of asbestos was found on the floor.

The Supply House is shown as part of the Reduction Mill on the 1914 map. Excavation resulted in a large collection of cultural material, including newspapers dating to 1914, tobacco pouches, and fabric from blue jeans. A wooden barrel was buried in the deposit. The barrel contained whole liquor bottles, canvas belts, chewing gum, and heavy metal machinery parts. Specific artifacts included cigarette rolling papers ("Rizla Rolling Papers", made in France), cigar bands (made in New Jersey), paper wrapping for caramel candies from California, chewing gum wrappers (spearmint and peppermint "Rough House" brand), "Guckenheimer Whiskey" (post-1897), and "Bull Durham" chewing tobacco. A fireplace was located in the southwest wall of the Supply House.

The Blacksmith Shop was a concentration of lumber, nails, and horseshoes. Scrap metal and braces were found. A wagon frame was also recovered.

The Office was a scatter of very disturbed building materials. The building had been burned. Artifacts were collected from the surface and a backhoe trench.

The Cook House was identified on the 1914 map. Four deposits were associated with this feature. Most of the artifacts recovered were

associated with kitchen activities, including two porcelain plates and one gilt plate.

The Assay House location contained a scatter of building material and piles of crucibles. Crucibles were twenty- and thirty-grams and were made in Denver and England. A small amount of kitchen items was recovered.

### Mill 2

Mill 2 was a large complex of features including power plant footings, a smelting furnace, stamp mills, steel tanks, timbers, and an engine (Figure 5). No surface artifacts were collected from Mill 2 because the area had been salvaged when the mine was abandoned. No dumps were found, since the Mill 2 workers lived in Obregon and all residential activities and deposits are associated with that area.

The Supervisor's House consisted of a mortared stone foundation, a well-made chimney, and two concrete stairways. No artifacts were found.

Other features mapped at Mill 2 included generator footings, the Tybo Shaft, and housing for factory equipment.

Other features found outside Obregon, Mill 1, and Mill 2, included isolated but related dump sites, including a dump from the assaying activities.

## ANALYSIS AND INTERPRETATION

The resources described in this paper fall into three large groups: Mill 1, Mill 2, and the town-site of Obregon. A series of research questions were developed to form a context for artifact and feature evaluation. These are summarized as follows.

### Question 1

How self-sufficient were the occupants of this company town, considering the distance of the town from "civilization?"

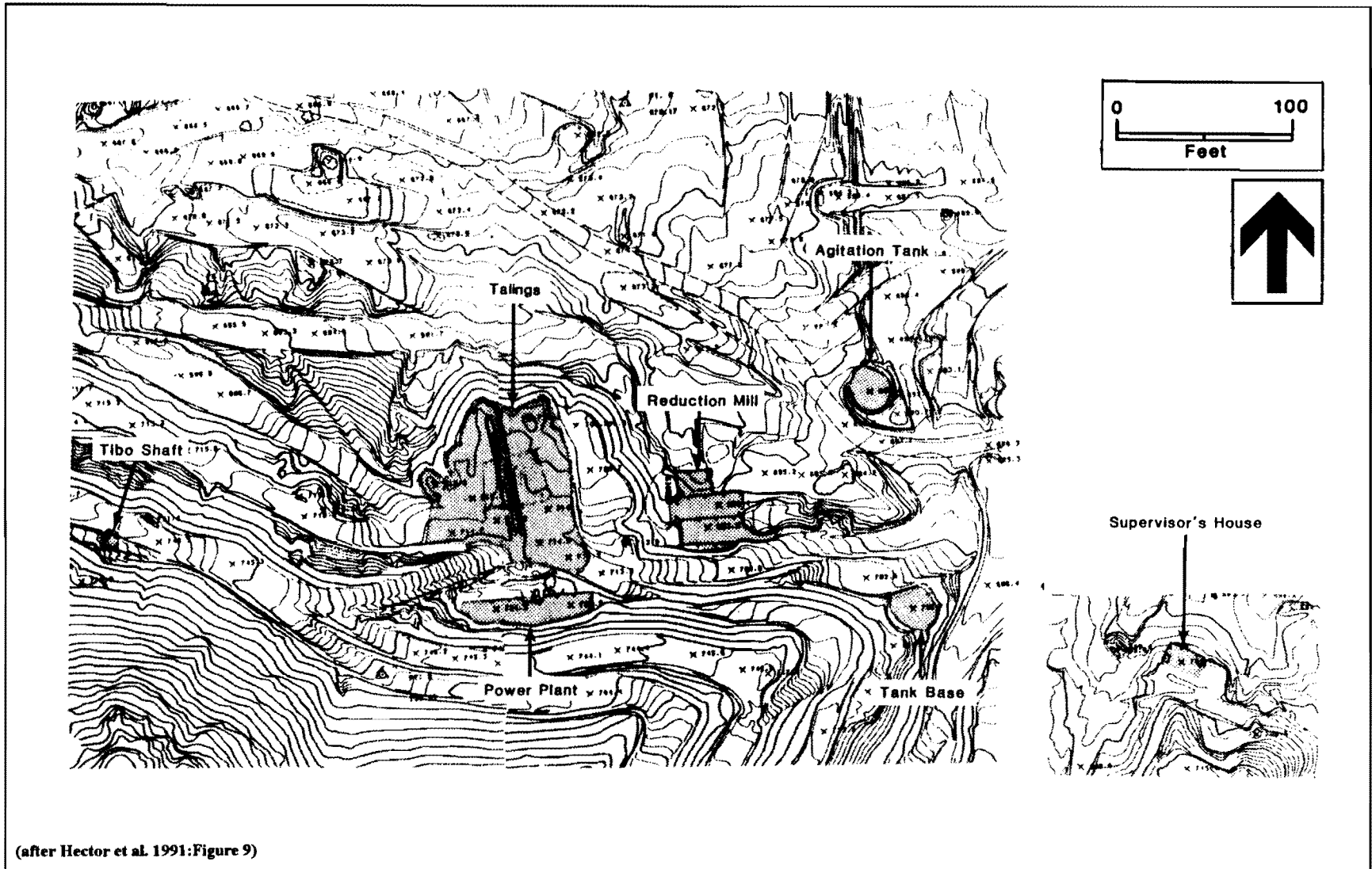


Figure 5. American Girl, features in Mill 2 area.

It would be expected that company town inhabitants would be highly dependent on outside sources of food and other goods. However, if the town was developing beyond the limits of a company settlement, independent ventures may have taken place. Economic hardship and changes in site function over time could also cause changes in self-sufficiency.

The archaeological evidence from Mill 1 supported the contention that the early historic occupants of American Girl Canyon were not self-sufficient. The Mill 1 occupation, from the late 1800s until 1914, was based on the company town type of settlement. It is not likely that families occupied the canyon. The archaeological evidence from the Cook House indicated a large amount of canned and prepared food; the 1914 map shows a bunkhouse where men lived. In addition, none of the archaeological materials recovered from the house sites in the Obregon area dated from the Mill 1 period.

The Mill 1 occupation was based on locally available goods, with little opportunity for individual preferences. Tableware, canned goods, and consumer items were all obtained by the company. The Supply House was an area where individuals could purchase or barter for goods, but the variety was limited; if an individual did not want to purchase Rough House gum, he was not going to be chewing any gum. It is interesting, however, that the Supply House provided the opportunity for men to purchase extras such as liquor, tobacco, and gum; it was these extras that made life in the Cargo Muchachos livable.

The Mill 2 and Obregon sites contained more evidence for independence and variation from the company town pattern. During the use of Mill 2, the workers and their families lived in the town of Obregon. Scattered settlement in Obregon, particularly between the Mill 1 and Mill 2 periods, was not well established; however, when Mill 2 was brought into production, pads were graded and houses were built on a grid of streets. The house types were similar, consisting of small wood or adobe buildings; although individual

customization was done, the basic forms of the houses were identical. The general absence of refuse associated with the houses themselves indicates that systematic garbage collection and dumping was available.

The materials recovered from Obregon Dump indicated much more individual choice than the materials from Mill 1. The availability of fresh food is demonstrated by domesticated animal bones and fruit pits. Relatively few tin cans were found in the dump. Household items included imported ceramics, serving pieces, decorative glass, and family items including toys and fasteners from ladies' undergarments. Very little hardware and mining refuse was recovered from the dump; the activities at Mill 2 were clearly segregated from the households of Obregon (although the noise from the engines and grinding mills must have dominated the town). Relatively few liquor, wine, and beer bottles were found at the Obregon Dump, suggesting that consumption of these drinks was controlled by the mining company during this period (although the scarcity of alcohol could have been due to residual effects of Prohibition, which lasted from 1919 to 1933). Imported and luxury items were obtainable, but the mining company continued to exercise considerable control over the individual and family.

### Question 2

How did the technology of industrial mining change from the early capitalist venture period (ca. 1900) to the abandonment of the large-scale mining complex?

Because of the existence of both an early and late mill (ca. 1914 and 1936), it should be possible to examine the development of mining technology. Since a railroad spur was built to Ogilby station, at the mouth of American Girl Canyon, the latest in mining technology should have been available through Yuma.

Although the equipment had been salvaged from Mill 1 and Mill 2 before the archaeological investigations began, the remaining features clearly illustrate the change from steam power to

the use of fossil fuels to remove the ore from the ground and process it. The change resulted in roughly twice the production capabilities in the 1930s, compared with the early part of the century. Archaeological evidence and historical sources confirm that the basic technology remained the same; both mills used grinding mills and cyanide to refine the ores.

### Question 3

How did the residential area and support facilities change over time? How were these changes related to changes in the standard of living at Obregon?

This question related to the ethnic and social composition of the town. Many towns such as Obregon had large contingents of immigrants. The degree of acculturation of an ethnic group into the larger community can be studied through an examination of the remains at Obregon. The social history and ethnicity of the town can be examined by comparing individual and group behaviors.

Very little evidence of social change was found at either Mill 1 or the Mill 2/Obregon complex. There are basically two reasons for the homogeneity found in the remains. The first reason is the levelling of ethnic diversity that occurred during the late Victorian period. Because of mass production and industrialization, goods and services became available to most Americans; the basic standard of living was high, and even those without extensive economic resources could obtain goods similar to those used by higher status families. The burial goods found during the movement of the five coffins from the Obregon Cemetery provide good evidence for this trend (Hector 1991).

The second reason is the fact that both the Mill 1 and Mill 2 workers lived in company towns, where a certain standard and style of living was enforced. Although some limited individual preferences could be expressed, the isolation of the area and oversight by the mining company would have suppressed any ethnic or cultural

idiosyncracies. The limited evidence for individuality is a few imported Japanese ceramics. In addition, the presence of a few adobe houses in Obregon may indicate Mexican occupants. No other archaeological or historical evidence for ethnic or cultural group differences was found.

To a greater extent, the style of living conformed to a miner's style rather than to any cultural tradition. For example, the tent site and scattered camp remains near American Boy Mine, located approximately one mile east of American Girl, have much in common with the materials found at the Cook House associated with Mill 1. A diet consisting mostly of canned foods, controlled access to liquor and tobacco, and the general presence of wire and bent metal dominate these collections. The wire and bent metal represent the necessity of manufacturing many of the tools and implements needed for the household and the mining operation. These earlier mining sites contain extensive evidence for the reuse and modification of industrial items.

### Question 4

What impact did the development of Obregon have on the region, particularly Tumco and Yuma?

Obregon's regional impact can only be evaluated indirectly. Presumably, because Obregon did not develop into a mature community, remaining instead a company or boom town, the community did not leave traditional historical traces which would enable a more direct assessment of its effects. Located on a mining patent, the town never occupied private lands and, therefore, left no property tax information. There was no post office. The Obregon School of the 1930s was considered an auxiliary of the Ogilby School, and no separate public records of the school were kept. Reviewing local and regional newspapers yielded no direct references to the community, although the mining operation was periodically covered by the press.

Historical sources suggest that Obregon's main connection to the outside world was via

Ogilby, the nexus of supply and transportation for all of the southern Cargo Muchacho mining district. Situated on the Southern Pacific railroad line, Ogilby connected miners in American Girl Canyon with national markets, and, looking at the sources of the artifacts recovered, its supplies were as likely to come from Los Angeles as Yuma.

A longtime local resident whose relatives worked and lived at American Girl in the 1930s explained that many of the mine employees commuted daily between work in the canyon and either Winterhaven (in California) or Yuma (in Arizona). While it can be deduced that Obregon impacted its environment by providing employment and basic accommodations to workers and families, direct evidence of Obregon's regional impact as a community is scarce.

As a concluding statement, the archaeological excavations and recordation of the many features and mining systems located in American Girl Canyon provide some general observations about the interface between archaeology and history. A question that is often asked about historical archaeology is, If there is such a large amount of historical information available, why should extensive archaeological collections and investigations be conducted?

After the conclusion of this study, the answer was obvious. Although a great amount of history and informant data might be available about the technology or specific locations, this information does not provide insight into the lifestyles of the site inhabitants. The mining bulletins provide details about the kind of equipment used at Mill 1 and Mill 2, but they do not tell us that the men operating these mines chewed tobacco and gum, and wore denim pants and shirts. The archaeology adds a dimension to the history that would not be otherwise available. It can also tell the truth, while histories tend to gloss over certain events and situations. The mining activity in this lonely, isolated location comes to life when we can imagine the men descending the slopes from Mill 2 at the end of a long, dirty day, and entering their

small wooden houses where they were served fresh food on colorful platters brought from the tiny kitchen. Outside, a pickup truck collects the trash and spreads another layer of dust over the neighborhood where, despite the vast expanse of land in the valley, the houses are packed close together so that they do not interfere with the mining activities. The tailings from the mine nearly reach the edge of town, and the noise from the grinding mills and engines fills the air as the next shift begins work. The children attend the small nearby school, and their mothers tend small groups of livestock and try to keep the dirt and smoke out of their houses for another day.

In early times, the men operating Mill 1 sweated in the Blacksmith Shop and the Assay House, walked across the slope to the Cook House to eat canned meat and drink canned milk and sodas, and then moved on to the Bunk House, where they enjoyed some amount of liquor and tobacco. At this time, during the late part of the nineteenth century, some settlers and prospectors lived in the canyon, near what was to become Obregon. These may have been the homes of the Mill 1 miners who had families that they brought to this remote location. The presence of this earlier settlement is illustrated by a limited number of artifacts from the late 1800s, as well as the five burials. Most of the traces of this early settlement near Obregon were destroyed during the reoccupation in the 1930s.

It is clear that we have gained a much greater appreciation for the dedication and desire that drove men and women to seek employment and, perhaps, riches in the remote hills of eastern California. Their individual, cultural, and ethnic preferences were subverted for the good of the mining company in the hope that a better life was being created for them and their children.

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