Reward Mine and Associated Sites

Historical Archeology on the Papago Reservation

By
George A. Teague

Western Archeological Center
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Miner's tent in southern Arizona at the turn of the century.

Chapter 1

INTRODUCTION

Report Summary

This is the final report of the Vekol Hills Archeological Project. The project was done to lessen the impact of proposed open pit copper mining on archeological resources within an area of the Papago Indian Reservation, Pinal County, Arizona (Figure 1). Archeological resources comprise the remains of Reward Mine, another turn-of-the-century mining camp, and a Papago camp of the same period. A program of data recovery, including mapping, surface collection, and excavation, was undertaken during 1979 in order to comply with provisions of Federal environmental legislation.

This report has a certain amount of redundancy built in so that each chapter can stand alone. The reason for this is my conviction that nobody reads one of these reports straight through. Those interested only in management aspects of the project need look no further than the first chapter. Following this are descriptions of the study area and its history, and the rationale of the data recovery program. Descriptions of the resources and the artifacts recovered from them are given in the middle of the report, and Chapter 7 provides a synthetic statement of what was learned. The last chapter contains an essay on the potential of Victorian mining camp remains for contributing to our knowledge of the past. This is not a recommendation for further work, but rather the presentation of some ideas that may interest researchers working on other projects.

A glossary of archeological and mining terms likely to be unfamiliar to the casual reader is at the back of the report.

Chapter 2

ENVIRONMENT AND CULTURAL SETTING

Location and Natural Resources

The study area is located in the foothills of the Vekol Mountains, some 25 miles southwest of Casa Grande, Arizona. The Papago village of Kohatk is nearby. The hills are at an elevation of about 2,000 feet above sea level, and are eroded remnants of mountain pediments at the edge of Santa Rosa Wash. Extensively tilted and faulted limestones and granites compose the deep strata, and extremely shallow soils and gravel pavements are the typical surface exposures on flats (Carpenter 1947).

The study area is within the Lower Sonoran Life Zone. Common plants include paloverde, mesquite, creosotebush, prickly pears, and saguaros. Saguaros are particularly dense. Animals common to the area are deer, antelope, mountain sheep, peccary, and a variety of lesser species (Lowe 1964; Lowe and Brown 1973). The area is without permanent surface water, and water is available at all only from wells and tanks. According to various maps, there are supposed to have been wells both at Reward Mine and near Site 19, but no evidence of them was found.

In general, the environment in the region is thought to have changed little in the past hundred years, but it is of note that widespread arroyo cutting and uncertain rainfall cycles began in the Southwest about 1865 and were in full force by the 1880s (Cooke and Reeves 1976). This resulted in alteration of ground water levels and stream flow, producing a form of environmental deterioration which may have had considerable impact on local Papago farming practices.

In addition to saguaro stands, the aspect of the environment of greatest interest to area residents a century ago was the presence of economic minerals. Abundant exposures of copper and zinc ores were found

throughout the study area, and silver- and gold-bearing deposits are also present in limited amounts. In short, cactus and copper were the natural resources of prime importance to the Vekol Hills miners and Indians.

History Of The Study Area

Mining in the Vekols

Before 1880, southern Arizona was on the dreariest fringes of the Sonoran frontier. Transportation and communication lines, such as they were, were served by stage from Los Angeles and by sea from San Francisco through the Gulf of California. Goods were transshipped to steamers and sent along the Colorado River to Yuma and points north (Paul 1963: 155). From the river towns, supplies went overland to Tucson and then to smaller outlying communities. Costs of all imported goods, including food, were enormous (Hamilton 1884). The completion of the transcontinental railroads around 1880 changed all this. From a marginal position on the periphery of western America, southern Arizona changed overnight to a functional cog in the national transportation and distribution machine. The new focus was along the Phoenix-Tucson-El Paso axis, with links to the East Coast (Meinig 1971: 45-50).

Population in the Southwest soared, doubling once between 1880 and 1900, and doubling again between 1900 and 1920 (Meinig 1971: 52, 83). With the increased population, and with ready, cheap transportation, Arizona's large, low-grade copper deposits could at last be mined to good profit. Although the national economy was in a state of chaos during the last quarter of the 19th century, copper prices remained relatively high, and there were brief periods of industrial prosperity (Hays 1957: 43-50; Navin 1978: 13). Encouraged by all these factors, a series of copper mining booms began in the 1880s.

Evidence of this period of expansion can be seen in the many shafts, dumps, and tailings piles which still dot the Vekol Mountains. Included among these are a number of historically notable mines, such as the Vekol, Christmas Gift, Great Eastern, Copperosity, and Reward. These properties were mined variously for copper, silver, zinc, and gold. Occupation of

the mines centered around the turn of the century, and coincided with the boom-or-bust cycle of widely fluctuating metal prices.

Within the study area proper, the only remains of substance are the Reward Mine Complex, a small mining camp called Site 44, and a small Papago camp called Site 19. Site 19 had mine-related artifacts within it, but apparently no records were made of it during the historic period. I believe it dates from about 1885-1900.

No records of Site 44 have survived in any of the obvious places, and even the mine's proper name in unknown. Judging from artifacts recovered, the site was occupied during the period ca. 1900-1915.

The Reward property consists of two patented claims and 28 claims held by location (Bureau of Mines 1943). Claims adjoin, and included among these are the Reward, East Reward, South Reward, Coppersilver, Copper Wedge, Celt, Bon Homme, Phonodoree, George, Virginia, Patrochis, and Phenomenon (Bureau of Land Management 1958).

What I have chosen to call the "Reward Mine Complex" (See Figure 3 in Chapter 4) is actually an area including the Reward, East Reward, and George Claims, and the considerable remains of camp and company facilities. Numerous shafts and prospects exist to the south, but are without accompanying surface remains.

Documents are available for Reward Mine, but they are few and not as informative as one might wish. Tenny (1933) and Denton and Haury (1946) have presented the best summaries. Reward was discovered in 1879 or 1880, and copper ore production began in the early 1880s with the sinking of the Reward Incline and the Phonodoree Shaft. According to the U.S. Mint report for 1883, 700-1000 tons of 26 percent ore had been produced during that year, and was on the dump ready for treatment. In 1884, an 800-foot deep well was sunk, and one or two small, water-jacket blast furnaces were installed (Denton and Haury 1946: 4; Tenny 1933: 9). In 1885 the furnace was put in blast and 19 tons of black copper was produced. Later that same year the mine closed.

In 1902 the smelter was rebuilt and enlarged to a capacity of 30 tons per day. There was some copper production the following year. With the coming of the 1905 copper boom, the mine was sold. During 1907-1908 a

moderate amount of high grade copper ore was shipped to El Paso for refining. No smelting was done on the ground. The mine closed again in 1908 (Anonymous 1958; Tenny 1933).

In 1915, some small amount of mining was done at Reward, and carbonate and silicate of zinc ore were produced (Weik n.d.). During World War I, smelter slag containing five percent copper was shipped from Reward (Cates n.d.). There was some interest in the Reward group of claims in 1918, but no specific activity was reported (Arizona Mining Journal 1918: 28). The dumps were worked over once again in 1929, when a large tonnage of slag was shipped (Bureau of Mines 1943; Tenny 1933).

During World War II sampling cuts were made and test holes were drilled in the zinc belt south of the Reward Complex, and the Phonodoree Shaft was retimbered (Denton and Haury 1946). This work apparently came to naught, and no evidence remains except scattered drilling cores and closed shafts.

The corporate history of Reward is confusing. Primary sources are a mare's nest of conflicting claims and altered dates. The order of company succession is something like this:

London Arizona Company - ca. 1880 (Denton and Haury 1946: 4)

Reward Mining Company - 1883 (Tenny 1933: 9)

Virginia Mining and Smelting Company - 1883 and later (Arizona Corporation Commission n.d.; Pinal County 1883, 1897, 1901)

United Arizona Copper Company - 1902 (Tenny 1933)

Reward Consolidated Copper Company - 1902 (Pinal County 1902b)

Casa Grande Development Company - 1905-1910 (Anonymous 1958; Arizona Corporation Commission n.d.; Tenny 1933)

Gadsden Copper Company - 1914-1915 (Arizona Corporation Commission n.d.)

Casa Grande Arizona Mining Company - 1916 (Arizona Corporation Commission n.d.)

Pomeroy and Shornick interests - 1924-1929, and later (Bureau of Mines 1943; Denton and Haury 1946).

Other companies mentioned as having interests in the properties, although without specific dates, are the Arizona Copper Company and the Hester (or "Hater") Company (Bureau of Mines 1943; Denton and Haury 1946). Some of these companies worked the Reward deposits, while others did not.

Eighteen pottery doll parts were found, representing a minimum number of seven dolls. All pieces fit into late 19th and early 20th century styles of manufacture and decoration, as described by Noël Hume (1972: 317-318). Fragments are of unglazed, hard-fired bisque pottery, or of glazed porcelain, and are either pink or white. Included are molded busts, legs, arms, and one torso fragment. Arms and legs are grooved or perforated to aid attachment to cloth bodies. Limbs were made in two styles, the straight, rather stylized form of the late 19th century, or the curved, more naturalistic style of the present century. Calves and thighs are exaggerated in the way popular with Victorians.

Miniature dishes are present in the collection in the form of 17 fragments representing a minimum number of five small cups and saucers. Methods of manufacture and decoration differ not at all from the full size porcelain dishes described in the section of this report devoted to commercial ceramics. Miniature dishes are all of coarse porcelain. Two specimens have poor quality blue transfer prints underglaze. The remainder are white glazed with hand painted or floral decal overglaze designs. Molded elements were also incorporated in designs.

Six reeds and one side plate from harmonicas were found. The side plate is stamped "M. Hohner."

Smoking pipes are represented by two hinged metal covers and one clay stem. One of the covers is brass, the other white metal. Both are hinged, and are characterized by elaborate perforated designs. Similar covers are illustrated on page 333 of the 1897 Sears, Roebuck & Co. catalogue. The pipe stem fragment is of white ball clay, and was once a part of a long stemmed pipe. Such pipes have been made for the past 400 years, and can be bought today. Clay pipes of the 18th century may be dated by the diameter of the stem bore, provided there is a large sample, but this technique does not work for 19th century pipes.

One bead was found. This is a wire-wound pale blue glass bead with a diameter of 7/16 inch. The form is "plain oblate," using Sleen's terminology (Sleen 1967: 38). It would be classified as Type WIb3, following Kidd and Kidd (1970: 62). According to Father Charles Polzer, it was probably used for decoration, rather than as a rosary bead.