

**SALT RIVER PROJECT:
SUPERIOR TO SILVER KING 115 kV
TRANSMISSION LINE REROUTE,
PINAL COUNTY, ARIZONA**

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ABSTRACT

REPORT TITLE: Salt River Project: Superior to Silver King 115 kV Transmission Line Reroute, Pinal County, Arizona

REPORT DATE: March 6, 2012

AGENCIES: Private

PROJECT DESCRIPTION: A cultural resources inventory of 1.2 linear miles of electrical transmission line right-of-way

PROJECT NUMBER: 807.40 A 500 (WestLand)

LOCATION: Township 1 South, Range 12 East, portions of Sections 26, 27, and 34, Pinal County, Arizona, Gila and Salt River Baseline and Meridian

USGS 7.5' QUADRANGLE: Superior

ACREAGE: 36.6

REGISTER-ELIGIBLE PROPERTIES: 1 – AZ U:12:218(ASM)

REGISTER-INELIGIBLE PROPERTIES: 1 – AZ U:12:217(ASM)

RECOMMENDATION: The cultural resources inventory identified two archaeological sites within the project area. AZ U:12:217(ASM) is the Silver King Road, which was in place by 1948. The other site, AZ U:12:218(ASM) (NA15692[MNA]), is a miner's cabin. Arizona State Museum site files indicated that a third site, NA15722(MNA), might also be located in the project area. This site is in fact located west of the present project area and was excavated between fall 1978 and spring 1979. WestLand Resources, Inc. (WestLand), recommends that AZ U:12:218(ASM) (NA15692[MNA]) is eligible for listing in the National Register of Historic Places, but that AZ U:12:217(ASM) is not eligible for listing. WestLand recommends that Salt River Project take steps in the design, construction, and future maintenance of the transmission line to avoid adversely affecting AZ U:12:218(ASM). If avoidance is not a viable treatment, then WestLand recommends the development of an archaeological program to resolve the adverse effect.

PROJECT BACKGROUND

Salt River Project (SRP) plans to reroute a segment of the Superior-Silver King 115 kV transmission line that crosses lands owned by Resolution Copper Mining (Resolution) west of Superior, Pinal County, Arizona (*Figures 1 and 2*). The transmission line draws power from the existing SRP Silver King to Kyrene East End Transmission System (SKKEETS). The transmission line corridor is approximately 1.2 miles (1.7 kilometers) long, 200 feet wide, and encompasses approximately 36.6 acres. The transmission line is located entirely on lands owned by Resolution, and the project is the relocation of an existing 115 kV line segment.

The relocation of the power line will be the subject of an Arizona Corporation Commission review and will require the attendant Certificate of Environmental Compatibility. Resolution retained WestLand Resources, Inc. (WestLand), to identify cultural resources that might be affected by the construction and maintenance of the proposed rerouted power line. WestLand performed the cultural resources inventory to the standards required for compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended). The inventory consisted of a literature search, records check, and pedestrian archaeological survey. The initial archaeological survey and site recording were conducted by William L. Deaver and Annie King on October 6 and 7, 2011. Additional acreage added to the transmission line corridor was surveyed by William L. Deaver on February 16, 2012.

The cultural resources inventory identified two archaeological sites and 38 isolated finds within the project area. AZ U:12:217(ASM) is the Silver King Road, which was in place by 1948. The other site, AZ U:12:218(ASM), is a miner's cabin. This site is located within the Gerald Cansler lode mining claim (GLO Patent 857949) that was owned by the Magma Chief Copper Company in 1922. Arizona State Museum (ASM) site files indicated that a third site, NA15722(MNA), might also be located in the project area. This site is in fact located west of the present project area and was excavated between fall 1978 and spring 1979 (Yablon and Weaver 1981). Most of the isolated archaeological finds are related to mining in the area. These consist of cairns, prospects, excavations, roads, and pipelines. The exact age of many of these features is unknown. Other isolated archaeological finds are probably related to the use of Silver King Road and represent trash tossed along the roadside. Two isolated artifacts were found that represent Native American activities in the area.

WestLand recommends that AZ U:12:218(ASM) is eligible for listing in the National Register of Historic Places (NRHP), but that AZ U:12:217(ASM) is not eligible for listing. None of the isolated finds are considered eligible for the NRHP. WestLand recommends that SRP take steps in the design of the transmission line to avoid affecting AZ U:12:218(ASM).

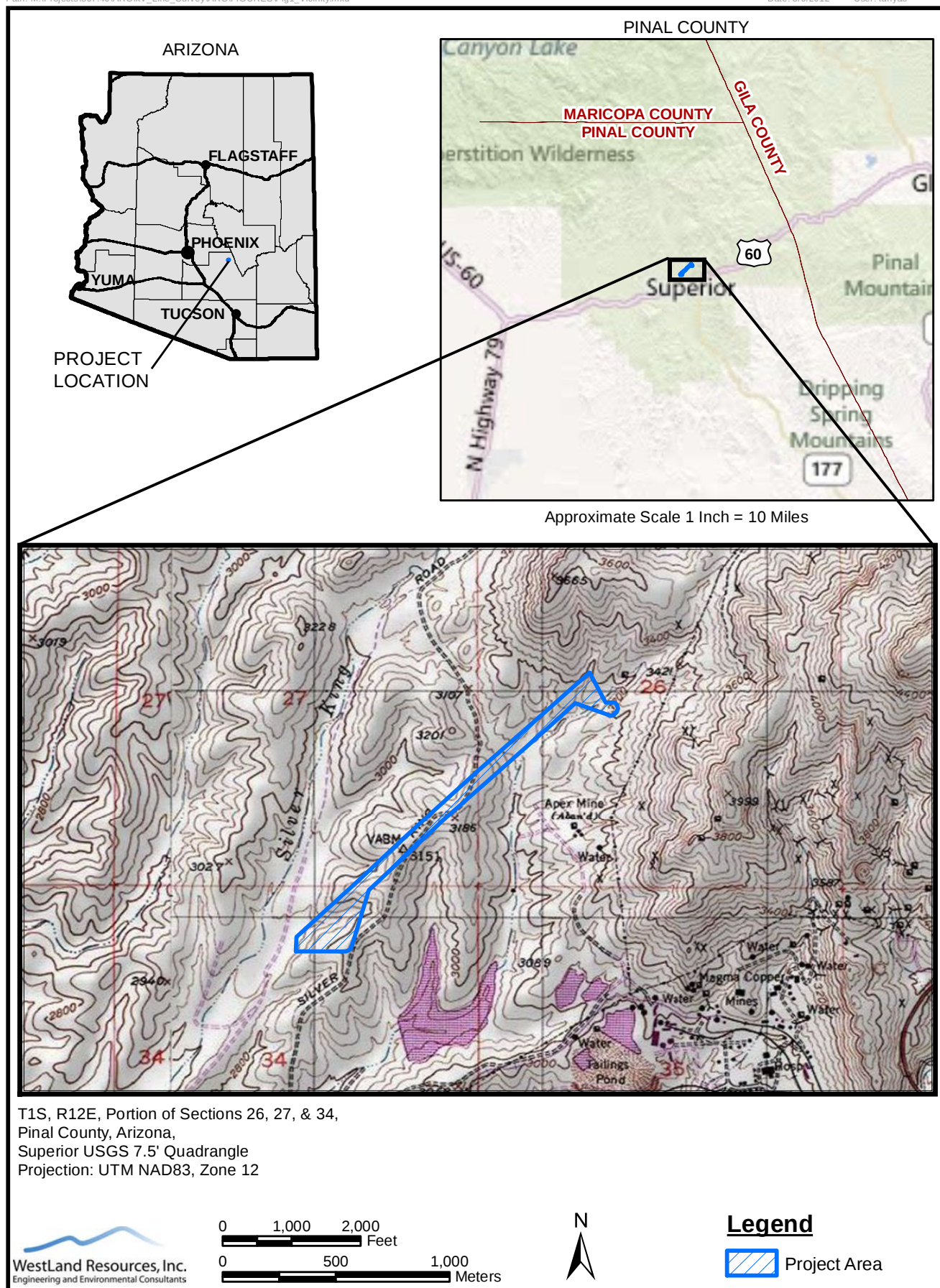


Figure 1. Vicinity map

Figure 2 Removed: Sensitive Data

ENVIRONMENTAL BACKGROUND

The project area is located in a hilly area west of Superior, Arizona, north of U.S. 60 and east of the Silver King Wash. The topography is defined by mountainous bedrock outcrops whose lower flanks are blanketed by ancient gravelly alluvium (*Photos 1 and 2*). The alluvium has been eroded, forming narrow, steep-sided ridges that generally run northeast to southwest. There is no permanent surface water in the area, and surface runoff is channeled in washes that are deeply incised into the landscape. The ground is rocky. Vegetation is



Photo 1. Overview of project area looking northeast

characteristic of the Jojoba-Mixed Scrub Series of the Arizona Upland Subdivision of the Sonoran Desertscrub (Turner and Brown 1994). The dominant low-growing shrub in the project area is jojoba (*Simmondsia chinensis*), with triangle-leaf bursage (*Ambrosia deltoidea*) interspersed. Trees and larger shrubs include mesquite (*Prosopis* sp.), paloverde (*Cercidium micophyllum*), and catclaw (*Acacia greggii*). Cacti are common and include prickly pear (*Opuntia* sp.), various chollas (*Opuntia* sp.), saguaro (*Carnegiea gigantea*), hedgehog (*Echinocereus* sp.), and fish-hook barrel cactus (*Ferocactus wislizenii*).



Photo 2. Overview of project area looking southwest

CULTURAL HISTORY FOR CENTRAL ARIZONA

This section presents a cultural setting for the project area and the surrounding region (*Figure 3*). It covers the entire range of potential human occupation of the area, even though remains from many of the periods discussed below (e.g., the Paleoindian period) are unlikely.

PALEOINDIAN PERIOD (CA. 10,500–9200 B.C.)

There is little evidence of a Paleoindian occupation in the immediate area of this project. Other parts of southern Arizona, however, have been important to the study of Paleoindians in the Southwest (Mabry 1998). Well-known Paleoindian sites are located west of the Sulphur Springs Valley at Naco (Haury 1953), at the Lehner Ranch (Haury et al. 1959), and at Murray Springs along the San Pedro Valley (Haynes 2002; Reid and Whittlesey 1997). Isolated Paleoindian projectile points have been reported for the Phoenix Basin, including several Clovis points (North et al. 2005), and for the Tucson Basin (Doelle 1985; Huckell 1984a). Current evidence suggests that Paleoindian groups were small and that they hunted big game, including mammoth, and gathered other subsistence resources. The most distinctive Paleoindian artifacts are the large fluted projectile points, such as Clovis and Folsom, that would have been hafted to hand-held spears (Slaughter 1992:2.6–2.9). Archaeologists believe that Paleoindian groups were highly mobile and that they selected high-quality lithic materials for tool production (North et al. 2005:297).

ARCHAIC PERIOD (CA. 9200 B.C.–A.D. 1)

Although a number of Archaic period sites have been documented in Arizona, e.g., the Tucson Basin (Freeman 1999; Mabry and Archer 1997), Phoenix (Hackbarth 1995), the Tonto Basin (Clark and Vint 2004), the Payson area (Huckell 1978b), and the Cienega Creek Valley of southern Arizona (Huckell 1995), this type of site is relatively rare in the vicinity of the project area. The following account, therefore, presents a very general outline of the Archaic period in southern Arizona.

The transition from the Paleoindian to the Archaic period correlates with a change in the environment that distinguishes the Holocene epoch from the preceding Pleistocene epoch. Whereas Paleoindian cultures are characterized as big-game hunters, Archaic cultures are perceived as generalized hunters and gatherers (Mabry 1997:4). These Archaic cultures sustained themselves using a more generalized subsistence strategy, one that consisted of hunting the large game animals characteristic of the Holocene epoch and of gathering a broad spectrum of plant foods. The transition from the Paleoindian period to Archaic occupation remains poorly understood, contentious, and difficult to explain, partly due to the paucity of data (Huckell 1984a; Huckell and Haynes 1995; Waters 1996). This transition probably was not abrupt, and some have suggested that people practicing both subsistence strategies may have lived at the same time and occupied the same territories (Faught and Freeman 1998:50). That being said, 8500 B.C. is often taken as the starting point of the Archaic period because it was around this time that a ground stone tool industry consisting of handstones and netherstones became common across the Southwest (Huckell 1996:306, 327). The Archaic period ends in southern Arizona with the appearance of pottery, which is generally accepted as an indicator of sedentary agricultural cultures. This development is estimated to have taken place between A.D. 1 and 150 (Deaver and Ciolek-Torrello 1995).

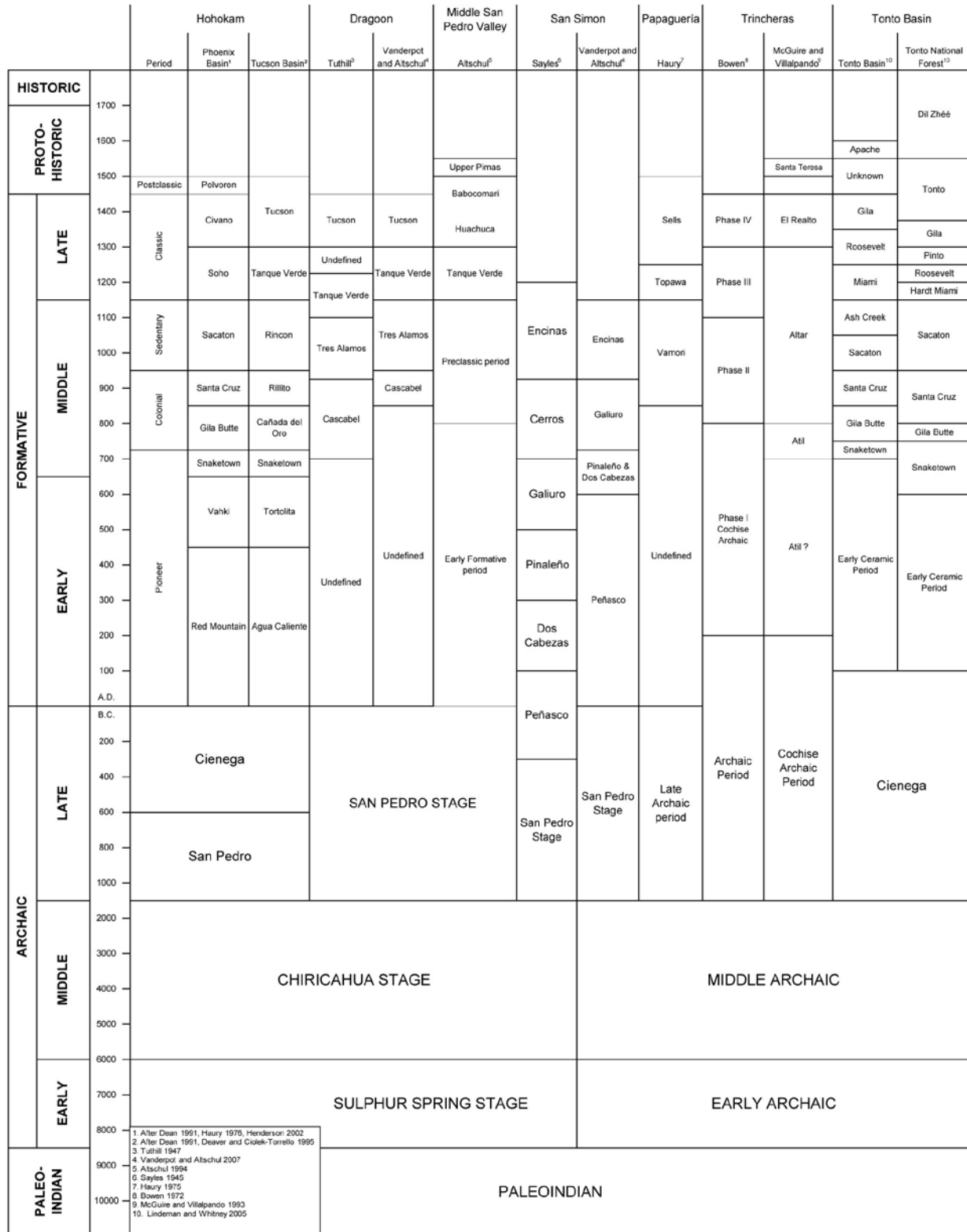


Figure 3. Synoptic chart of selected cultural chronologies from central and southern Arizona

Several regional Archaic traditions are recognized: the Cochise tradition across southern Arizona, northwestern Chihuahua, and northern Sonora (Sayles 1983); the Oshara tradition on the Colorado Plateau (Irwin-Williams 1967); the San Dieguito-Pinto tradition in southwestern Arizona, western California, and southern Nevada (Huckell 1978a; Rogers 1966); the Hueco Basketmaker complex in western Texas and southeastern New Mexico; and the Frontera complex in the northern Mexican states of Coahuila and northeastern Chihuahua. In recognition of the many cultural similarities that characterized these local traditions, Irwin-Williams (1967, 1979) suggested that each was a manifestation of an overarching cultural tradition she termed the Pecos culture. Further consideration of this issue led Huckell (1984a, 1984b, 1978b) to suggest that the Cochise culture and its counterparts be referred to collectively as the Southwestern Archaic. Temporally, the Cochise culture is subdivided into three broad divisions: Early Archaic (ca. 8500 to 6000 B.C.), Middle Archaic (ca. 6000 to 1500 B.C.), and Late Archaic (ca. 1500 B.C. to A.D. 1).

THE HOHOKAM

The Hohokam were primarily a sedentary farming people who lived in villages consisting of clusters of single-family dwellings. During most of the Hohokam tenure, dwellings were made by building a structure of jacal (post and adobe) in a shallow pit. The roofs were made of similar materials. Late in the chronological sequence, the Hohokam built adobe-walled structures grouped within walled compounds. The Hohokam are known for their use of canal irrigation and for building platform mounds and ballcourts. Throughout most of their tenure in the basin, the Hohokam cremated their dead, although they later replaced this practice with inhumation. The Hohokam produced plain, red, red-on-buff, and red-on-brown ceramics constructed mainly by the paddle-and-anvil method. They also produced clay figurines and objects of shell, bone, and flaked and ground stone (Fish 1989; Gumerman and Haury 1979; Haury 1976).

Archaeologists make two basic divisions in the Hohokam chronology: the pre-Classic and the Classic. The pre-Classic is divided into three periods: the Pioneer, the Colonial, and the Sedentary. These periods, along with the subsequent Classic period, are further broken into phases. There are numerous problems in assigning dates and temporal ranges to the Hohokam chronology (Fish 1989), and numerous Hohokam chronologies abound (Dean 1991). Most researchers agree with the phase sequence developed following the excavations at Snaketown (Gladwin et al. 1937; Haury 1976); however, many strongly support the temporal compression of the Pioneer period phases (Fish 1989; Schiffer 1982).

Following are brief discussions of the periods and phases of the Hohokam chronology in the Phoenix Basin.

The Pioneer Period (ca. A.D. 1–775)

In the Phoenix Basin, the Pioneer period encompasses five phases: Red Mountain, Vahki, Estrella, Sweetwater, and Snaketown. During the Pioneer period, Hohokam pithouse villages developed, canals were built, a few trash mounds were purposefully capped with a caliche plaster, and red-on-buff pottery was produced (Eighmy and McGuire 1989; Fish 1989; Haury 1976).

Cable and Doyel (1987) suggested the Red Mountain phase to cover the transition from the Archaic to the Hohokam culture. Doyel (1991a) lists the characteristics of the Red Mountain phase as including small square houses, flexed inhumation burials, basin metates, and large corner-notched projectile points. Crown (1991a) adds clay figurines and sand-tempered plain brown pottery to the list. Mabry (2000), however, states that round, oval, rectangular, and square structures have been documented. Mabry (2000) has summarized the available absolute dates for the phase, giving it a range from A.D. 1–450, although Doyel (1991a) and Dean (1991) place the end of the phase at A.D. 300.

Archaeologists have identified Red Mountain phase components at Pueblo Patricio, the Red Mountain site (Cable and Doyel 1985, 1987), Heritage Square (Henderson 1985), and possibly at Block 39 (Montero and Hackbarth 1992). Several sites north of the Phoenix Basin have also yielded radiocarbon dates in the Red Mountain phase date range (Mabry 2000:40).

Archaeologists have identified two types of structures for the Vahki phase: large square houses and small rectangular structures (Cable et al. 1985; Haury 1976). The large square houses might have served as communal structures (Doyel 1991a). Vahki phase assemblages include trough metates, plain brown ware ceramics, and polished red ware ceramics (Crown 1991a). Vahki ceramics were made by both the paddle-and-anvil and coil-and-scrape methods (Foster et al. 1995). The production of carved shell jewelry, ground stone palettes, stone bowls, turquoise mosaics, and human figurines—although the latter may have appeared earlier—occur during the Vahki phase (Cable and Doyel 1987; Foster et al. 1995; Gladwin et al. 1937). Doyel (1991a) has stated that 90 percent of the figurines found at Snaketown (Haury 1976) dated to between the Vahki and Snaketown phases. Inhumation was the predominant form of burial during the Vahki phase (Doyel 1991a). Haury (1976:149) believed that canal irrigation was present at this time, but agriculture might nevertheless have consisted mainly of dry farming and floodwater farming (Crown 1991a; Doyel 1991a).

The Estrella (A.D. 500–600) and Sweetwater (A.D. 600–700) phases are typified by Estrella and Sweetwater red-on-gray pottery, respectively. Together these phases represent the transition between the Vahki and Snaketown phases, between a Vahki-phase Hohokam cultural pattern that is similar to patterns seen in other regions of the southwest and a Snaketown-phase Hohokam pattern that stands out as unique. Estrella Red-on-gray often included grooves between the coils of the pot on the outside of the vessel and simple, broad, red-line designs. Haury (1976:220) identified an early version of Estrella Red-on-gray in which the potter polished over the painted lines, giving them diffused edges. Sweetwater Red-on-gray pottery sits as a transition between the earlier Estrella Red-on-gray and the later Snaketown Red-on-buff. Sweetwater Red-on-gray retains the practice of incising the exterior of vessels, but the incising is not constrained to the coils of the pot and often produces elaborate decorative patterns. The painted designs become more elaborate as well showing the emergence of a particular decorative style involving interlocking, hachure motifs. Estrella houses at Snaketown included square and rectangular structures, although both were smaller than the square structures of the Vahki phase at that site. By the Sweetwater phase, rectangular houses were the norm. Cultural materials from the Vahki phase, such as figurines with crude featureless faces, continued through the Estrella and Sweetwater phases (Haury 1976).

The Snaketown phase (A.D. 700–775) brought numerous changes to the Hohokam. New traits included the deposition of trash in mounds, the construction of patterned house clusters, the introduction of buff

ware ceramics, and the use of cremation as the dominant treatment of the dead. Domestic-use structures increased in size during the Snaketown phase, although the large square houses were no longer constructed. By this phase, the Hohokam appear to have developed a pattern of grouping several houses together around a courtyard area (Doyel 1991a). Pithouses were typically of the house-in-pit variety (Haury 1976). Ceramics changed from red-on-gray to red-on-buff and were manufactured with the paddle-and-anvil method. Stone palettes, censers, and figurines became common and were often included as burial goods. Although evidence indicates that canal irrigation was present earlier, the first large-scale irrigation systems appeared during the Snaketown phase (Foster et al. 1995).

Colonial Period (ca. A.D. 775–950)

The Colonial period is made up of two phases: the Gila Butte (A.D. 775–850) and the Santa Cruz (A.D. 850–950). During this period, Hohokam culture spread beyond the Phoenix Basin and throughout southern and central Arizona. Oval-shaped ballcourts were constructed, and villages within the basin became larger. Well-crafted projectile points and carved and etched shell were common; cremation burials were standard (Fish 1989; Haury 1976).

In the Gila Butte phase, structures (houses-in-pits) were primarily rectangular and organized into courtyard groups. These courtyard groups consisted of several structures oriented toward a common-use courtyard area (Crown 1991a). At the Grewe site, the locations of the courtyards showed a trend toward becoming more permanent, with houses being rebuilt around the same courtyard (Craig 2000). Ballcourts had appeared at a number of sites by the Gila Butte phase (Doyel 1980, 1991a; Wilcox and Sternberg 1983). The ballcourt complex is one of the strongest indicators of Mesoamerican influence on the Hohokam (Wilcox 1991).

These trends in architecture and the material culture continued through the Santa Cruz phase. According to Crown (1991a:148), red-on-buff pottery reached its zenith during this phase, with tightly packed and well-executed design motifs. Pithouses continued to be rectangular or slightly oval in shape and were almost entirely of the house-in-pit variety (Haury 1976).

Populations throughout the Hohokam world apparently increased during the Colonial period, in part because irrigation technology improved, facilitating the reliable cultivation of maize, beans, squash, and cotton (Reid and Whittlesey 1997). Ballcourts were built at the larger sites throughout southern Arizona (Wilcox and Sternberg 1983).

Sedentary Period (ca. A.D. 950–1150)

The Sedentary period consists of one phase, the Sacaton (A.D. 950–1150). During the Sedentary period, sites continued to increase in size, and some, such as Snaketown, had large central plazas and multiple ballcourts. The distinctive low “Gila shoulder” became common in pottery. Copper bells first came into use during the Sedentary period (Haury 1976). Sacaton phase houses were ellipsoidal and somewhat larger than the structures of the Colonial period. Pottery production appears to have declined in quality, and red ware once again became common. The etching of shell was practiced.

The Sacaton phase Hohokam expanded irrigation throughout the Phoenix Basin. Doyel (1981:70) believed, “It is likely that the vast majority of the canals mapped by Midvale (1965) in the Gila Basin were completed by the Sacaton phase. By the end of the Sacaton phase, many large Hohokam sites were abandoned, and, with the advent of the Classic period, there appears to have been a retraction of Hohokam populations from outlying areas and a consolidation within the Phoenix Basin.”

Many archaeologists believe that Hohokam participation in exchange networks was at its zenith during the Colonial and Sedentary periods (Crown 1991a, 1991b; Doyel 1991a, 1991b), although the presence of large numbers of Gila Polychrome ceramics in the Civano phase suggests that exchange was still common in the Classic period. Sedentary period materials from non-local sources include shell, copper bells, obsidian and other fine-grained stone used in flaked lithic tool production, and andesite and quartz-basalt for ground stone tools (Doyel 1991a:252). These materials indicate contact with the Anasazi, Mogollon, Dragoon, Trincheras, Yuman, and California coastal groups (Doyel 1991a).

Doyel (2000) has championed the use of the Santan phase to cover the period between A.D. 1075 and 1200, during the transition from the pre-Classic period to the Classic period. Doyel appears to have partly based his ideas about the Santan phase on his work at the Escalante Ruin (Doyel 1974, 1981). As Doyel (2000:232) stated, the differences between the remains that dated to the Sacaton phase at Snaketown and the Soho phase at Escalante were such to cause him to propose a phase that dated to between those occupations. Dean (1991:85) also identified a temporal gap that corresponded to Doyel’s proposed Santan phase.

Classic Period (ca. A.D. 1150–1350)

In the Phoenix Basin, the Classic period (A.D. 1150–1350) is made up of two phases: the Soho and the Civano. Architecture during the Classic period changed from shallow pithouses to adobe structures and adobe-walled compounds. The Hohokam further expanded their canal systems and constructed platform mounds. Ballcourts were no longer being built, but some may have continued to be used (Eighmy and McGuire 1989; Haury 1976).

Early Southwestern archaeologists viewed the Hohokam Classic period as the epitome of prehistoric culture in central and southern Arizona (Gladwin et al. 1937). However, as Abbott et al. (2003:4, 5) have stated, most archaeologists now view the Classic period as a time of rapid change and pressure from outside the region.

During this period, several of the major villages along the Gila River, e.g., Snaketown, were abandoned or only occupied on a limited basis. This is in contrast to the Salt River, where most large villages continued to be occupied (Foster et al. 1995). According to Gregory (1987), more new sites with platform mounds were established along the Salt River than along the Gila River.

During the Soho phase (A.D. 1150–1250), architecture consisted of both pithouses and above-ground structures (Doyel 1981). Post-reinforced and solid adobe-walled structures were built. Doyel (1991a) indicates that by this time, the regional ballcourt system had either weakened or ceased to exist and was replaced by large platform mounds. There was a decrease in the production of red-on-buff pottery and an increase in the production of red ware. Cremation burial in ceramic urns was common, although there is

also evidence of inhumation (Doyel 1974). Soho sites consisted of clusters of structures that were often surrounded by an adobe compound wall.

The Civano phase (A.D. 1250–1350) saw an elaboration of the architectural trends evident during the Soho phase (Doyel 1991a:253). Adobe walls became more substantial and rooms were often constructed in a contiguous pattern (Doyel 1974, 1981). Platform mounds are found at major sites, and great houses, the basal floors of which were platforms, were built at Casa Grande and perhaps at Pueblo Grande. During the Civano phase, inhumation burials dominated, Salado polychrome ceramics were the common decorated ware, and red-on-buff ware production drastically decreased. Crown (1991a) has stated that new platform mounds were not being built during the Civano phase, but that adobe structures were built on top of the existing mounds and apparently used as habitations. Downum and Bostwick (2003), however, analyzed data from early excavations at the Pueblo Grande platform mound and from the Hohokam Expressway project and concluded that the mound was not used as a full-time residence by an elite group. Instead, multiple groups may have used it for a variety of tasks, such as food preparation, feasting, food storage, and rituals and ceremonies (Downum and Bostwick 2003:199). This interpretation might apply to other platform mound sites as well.

Post-Classic Period (ca. A.D. 1350–1450)

In the Phoenix Basin, a late Classic or post-Classic phase termed the Polvorón has been identified (Chenault 1996, 2000; Sires 1984). However, some archaeologists working in the region (Henderson and Hackbarth 2000) believe that the Polvorón is not a valid phase and that the remains identified as Polvorón merely represent variation in the Civano phase.

The Polvorón phase marked a significant change in the Hohokam culture (Crown and Sires 1984). There appears to have been a dramatic decrease in population levels, a new preference for pithouses, and a return to the exploitation of diverse resources and marginal areas, with a possible decrease in the reliance on agriculture. Roosevelt Redware (Salado polychrome) ceramics were used in high frequencies, buff wares were used in very low frequencies, and obsidian use greatly increased (Doyel 1991a; Sires 1984).

The Polvorón phase was first defined by Sires (1984) and Crown and Sires (1984) from work on the Salt-Gila Aqueduct project. Excavations at the site of El Polvorón (Sires 1984) in the Queen Creek drainage revealed a small prehistoric site dating late in the Hohokam chronological sequence. Inhabitants of the site lived in pithouses, practiced agriculture, and had a material culture in the Hohokam tradition.

PROTOHISTORIC PERIOD (A.D. 1450–1700)

Between the Polvorón phase and the start of historical records associated with a European presence in the region (ca. A.D. 1700) is a period that is only now being somewhat illuminated (Wells 2006). Doelle (1981) has stated that the Pima of the middle Gila River were in a frontier or periphery of the system that was in operation at the time of contact with the Spanish, and that there was greater complexity in places like San Xavier in the Tucson Basin. There appear to have been significant changes in the region's Native American cultures; however, very little is known about the period prior to the arrival of Father Kino in the Tucson area in A.D. 1697. The Spanish identified the people living along the Santa Cruz River as the Pima (O'odham) and those along the San Pedro River as the Sobaipuri (Doelle and Wallace 1990; Masse

1981). Differences in the architecture and pottery of the Piman peoples and the Hohokam have led some researchers to question if the Hohokam were the ancestors of the O'odham, or whether the latter moved into the region after the Hohokam decline (Teague 1993).

HISTORIC PERIOD (1681–1950)

Spanish exploration of the Southwest began as early as 1539 with the preliminary scouting expedition of Fray Marcos de Niza, who had been sent to the region by Mexican viceroy Antonio de Mendoza in response to the accounts of Alvar Núñez Cabeza de Vaca and Estevan, who had wandered to Sonora after being shipwrecked in the Gulf of Mexico in 1528. After de Niza returned, Viceroy Mendoza proposed a larger expedition, and selected Vásquez de Coronado as its leader. Coronado's party departed in 1540 in search of the fabled Seven Cities of Cibola. The route of the expedition probably took Coronado through what is now eastern Arizona, although at one time it was speculated that one stop on the journey, Chichilticale or "Red House," was in fact the Hohokam adobe house at Casa Grande. Even though it does not appear that Coronado passed near the middle Gila River region, a preliminary scouting party led by Melchior Diaz journeyed up the San Pedro River and explored the area around the Gila-San Pedro confluence to the "east and west." The exact extent of this survey is unknown, however (Wilson 1999:25, 26).

These early forays into what is now the Southwest notwithstanding, the Historic period truly begins in 1681 with the arrival of Jesuit missionary Padre Eusebio Kino in Sonora. After a poorly documented visit to the Casa Grande area in 1694, Kino made a second *entrada* to the area in 1697 (Wilson 1999:24). Setting out from the Nuestra Señora de Dolores mission, Kino traveled north along the San Pedro River and then followed the Gila River to the west, arriving again at Casa Grande on November 18. He was accompanied by 20 soldiers and native guides and Captain Juan Mateo Manje. Manje, unlike Kino, kept well-written journals of his travels. The chronicle of this expedition notes "six or seven" Piman rancherías along the river in the area around Casa Grande. This appears to be the first known reference to the Pima by Europeans (Debowski et al. 1976:30). Escalante Ruin (AZ U:15:3[ASM]) may have been visited by Sergeant Juan Batista de Escalante, who was one of the military officers accompanying Kino on the 1697 expedition, encountering it after swimming across the Gila River from the southern bank (Lennon et al. 1995:29).

The people inhabiting south-central Arizona and northern Sonora, or the Pimería Alta, were referred to by the early missionaries by various nomenclatures, including the Papabotas (later the Papagos and now known by their traditional name, the Tohono O'odham) for the people living in the desert regions south of the Gila River and the Pima Gileños, or Gila River Pima, who inhabited perennial villages along the Gila River (the Akimel O'odham). Another group of people, referred to as the Cocomaricopas (Maricopas) by the Spanish, resided alongside the Pima Gileños. The Maricopas were Yuman-speaking peoples who had initially settled along the Gila River in the 1500s, probably in response to intertribal warfare.

The subsistence strategies practiced by these native peoples included the direct procurement of several resources (with wild melons and bighorn sheep being particularly important sources of food) and floodwater farming. It appears uncertain if irrigated agriculture was being used at this time (as it had during the Hohokam era), although a 1699 account by Captain Manje states that the Pima did not make use of canals to irrigate their crops, and relied upon floodwater (Wilson 1999:38). However, people in the

San Pedro valley are mentioned obliquely by Kino during an earlier visit as cultivating cotton by irrigated agriculture.

Owing to the efforts of Padre Kino, missionizing of the people of the Pimería Alta continued forward into the early eighteenth century, although after Kino's death in 1711 the mission system in Sonora began to deteriorate, partly as a result of neglect while Spain was distracted by the War of the Spanish Succession (Walker and Bufkin 1979:14). In a 1723 report on the state of the mission system in Sonora, Fray Daniel Januske reported that the native population of the Pimería Alta was declining, the result of poor living conditions at the missions and Apache raiding. The Apache had been raiding Piman settlements at least since the time of Kino's initial contact, and the increase in raiding over time resulted in more and more geographical shifts among the Piman-speaking populace. By 1750, for example, most of the Piman people occupying the San Pedro valley had been forced to move to the Santa Cruz and Altar Valleys. This turned out to be only a temporary solution when the Apache began raiding these locations as well.

In 1736, German-born Jesuit priest Fray Jacobo Sedelmayr arrived in the Pimería Alta and worked there as a missionary for the next 16 years. With the intention of finding a route to the Hopi, who had retained their autonomy against the Spanish since the Pueblo Revolt of 1680, Sedelmayr embarked on an expedition in 1744 that took him through the Casa Grande area. While there, he reported encountering the same people described by Kino half a century earlier, living in three rancherías. The first of these was called Tuquisan; four leagues (approximately 12 miles) downstream was Tussonimo; and the most westerly was Sudacsón (Wilson 1999:47–49). At Sudacsón (which was probably about 30 miles west of Casa Grande), Sedelmayr reported that the villagers were raising wheat (a crop that, unlike cotton, had been introduced by the Spanish) with irrigated agriculture.

King Charles III of Spain expelled the Jesuits from the New World in 1767 and replaced them with the Franciscan Order. Franciscan missionary Francisco Garcés, who took over the administration of San Xavier del Bac following the Jesuit expulsion, made several trips to the middle Gila country. On one of these expeditions (in 1774), he accompanied explorer Juan Bautista de Anza. On de Anza's return trip, Fray Juan Díaz noted that the Pima Gileños lived in consolidated settlements as a defensive measure against raiding Apache groups (Rea 1997:31).

Mexico gained its independence from Spain in 1821, and the period between this independence and 1846 (the year the Mexican-American War began) is when Anglo-Americans first established a substantial presence in the middle Gila region. The first Americans to enter the area appear to have been Sylvester and James Ohio Pattie, father and son beaver trappers who made several trapping excursions along the San Pedro, Gila, and Colorado Rivers during the years 1825–1826 (Walker and Bufkin 1979:17). In 1846, Colonel Stephen Watts Kearny, who had been charged with establishing American control of California and the Southwest, followed the Gila River west toward California after securing New Mexico. Along the way, he met Lieutenant Christopher "Kit" Carson, who informed him that the war in California was essentially over. Kearny continued westward with a minimal contingent of men, sending the rest back to New Mexico. Kearny followed the river, passing by the Piman villages. When he reached California, he found that Carson had exaggerated and that the hostilities there were not quite at an end; nevertheless, his trip had not been wasted, as it provided the opportunity for the first reliable mapping of the Gila River.

The Treaty of Guadalupe Hidalgo ended the Mexican-American War in 1848 and established the Gila River as the Mexican-American border from the western boundary of New Mexico to the confluence of the Gila and Colorado Rivers. Following the discovery of gold in California in 1849, the Gila Trail, as the route established along the Gila River by Kearny had come to be known, became a major thoroughfare for would-be gold miners on their way to California. The Piman peoples living along the Gila River frequently sold food and supplies to the westbound travelers and, when necessary, provided defense and sanctuary against the Apache. Recognizing this aid on the part of the Pima, Congress allocated \$10,000 for gifts (in the form of farming implements and other tools) in 1859. An additional \$1,000 was also allocated for a survey of Piman land (which is to say, a survey for the establishment of a reservation). Initially, 64,000 acres of land were set aside for the Pima, which was far less territory than they claimed and required for farming and grazing, but in 1869 an additional 81,140 acres were added, followed by another 9,000 acres on the eastern end of the reservation in 1876 (Russell 1908:31, 32).

In 1853, the Gadsden Purchase expanded Arizona from the Gila River south to the present-day Mexican border; 10 years later, the Arizona Territory was established after successful lobbying by Charles D. Poston. Mining camps and towns began to appear in the territory, specifically in the region colloquially referred to as the Copper Basin, a mineral-rich zone that lies between two ecological regions, the Tonto Transition section of the Colorado Plateau semi-desert province to the north and the Sonoran Desert section of the American semi-desert and desert province to the south (Seefeldt 2005:3).

THE PINAL MOUNTAINS AND THE SUPERIOR AREA IN THE HISTORIC ERA

The Pinal Mountains have been historically documented as the territory of the Western Apache, specifically the Pinal Band of the San Carlos group (Goodwin 1942:2). In the beginning of sustained European contact in the 1700s, the Pinal Band was known to the Spanish as “Pinaleños” (Spicer 1962:244). The territory of the Pinal Band included the mountainous areas around the modern town of Globe in the aptly named Pinal Mountains. The Salt River to the north marked the northern extent of the Pinal Band; the Dripping Springs Valley was the southern limit (Goodwin 1942:25). The spring, summer, and fall months were spent in the highest portions of the Pinal Mountains, hunting large game and collecting wild foods such as acorns from the Emory oak and the hearts of various agave species. Agriculture played a significant role in the diet of the Western Apache. Domesticated crops were known to have been cultivated around Wheatfields on Pinal Creek and near the confluence of Pinal Creek and the Salt River (Goodwin 1942:24). During the cold months, lower-elevation camps were established on the southern and southwestern faces of the Pinal Mountains and were used for staging raids on the Piman villages to the west and Mexican settlements to the south (Goodwin 1942:25). The Apache people were dependent economically on raiding and would rely on the acquisition of livestock and foodstuffs during the late winter and early spring months (Goodwin and Basso 1971). As Euroamerican populations increased in Arizona, these conflicts escalated to levels best expressed as open warfare, with atrocities attributed to both sides.

The Pinal Mountains were occasionally frequented by the Southeastern Yavapai, a hunting-and-gathering group that lived in central Arizona. The Yavapai were often confused with the Apache by Europeans due to their adjacent homelands and similar subsistence practices, and were mistakenly called “Mohave-Apaches” (Gifford 1932). They generally kept to the lower-elevation areas to the west and south of the

Pinal Mountains. However, Goodwin (1942:51, 89) reports that the Yavapai sometimes camped in the Pinal Mountains and would occasionally intermarry with the Pinal Band. Gifford (1932) states that the Southeastern Yavapai considered the Pinal Mountains to be within their territory; however, this information is based on limited informant interviews and a substantial Yavapai presence in the Pinal Mountains has not been proven. What is clear is that the Yavapai likely gathered together with the Pinal Band and other Western Apache bands in the western portion of the Pinal Mountains in order to stage raids on the settlements of Anglos, Mexicans, and native agriculturalists in the Gila Valley and Tucson Basin (Goodwin 1942:51). Raiding forays originating in the Pinal Mountains continued into the American period and were common during the 1860s (Thrapp 1967). The steep escarpment known as Apache Leap on the western edge of the Pinal Mountains was a natural fortress from which Apachean peoples could stage attacks on Piman villages and Anglo settlements on the Gila River (Lindeman 2006; Thrapp 1967).

In response to the promise of rich silver deposits, Euroamericans had been prospecting within the Pinal Mountains. Explorers such as King Woolsey and Cal Jackson searched for mineral deposits in the eastern portion of the Pinal Mountains near present-day Globe in the mid- to late 1860s (Bigando 1989). The important territorial town of Florence was established in 1866 along the southern bank of the Gila River 20 miles to the west of the Pinal Mountains. Florence grew rapidly in its first decade, making it one of the largest cities in the territory. When Pinal County was formed in 1875, Florence became the county seat. Increased mining in the mountain ranges to the north and east of Florence (Superstition, Pinal, and Dripping Springs Mountains), especially at Silver King, Mineral Creek (Ray), and Globe, attracted miners and prospectors to Florence to be outfitted and to record their claims (Myrick 1980:555).

Apache and Yavapai raids on the farmers and ranchers living on the Gila River became increasingly common in the early and mid-1860s (Thrapp 1967). This was partially due to the limited military protection afforded to the settlers, as the majority of US soldiers were enmeshed in the Civil War out east (Thrapp 1967). In response, American and Mexican settlers, with the assistance of Pima, Maricopa, and Papago volunteers, formed vigilante groups that were responsible for numerous punitive expeditions against the Apache and Yavapai. In 1865, the government formed the official Arizona Volunteers, a volunteer unit of Mexicans and Piman fighting men led by Anglos and Mexicans. The volunteers went on several expeditions against the Apache, but were officially disbanded in 1866. However, they may have been unofficially involved in punitive expeditions against the Apache until the early 1870s (Spicer 1962). On one occasion—the fabled Apache Leap incident—numerous Apache purportedly leapt to their deaths in the face of an overwhelming military force that may have included Arizona Volunteers (Farish 1918).

The legend of Apache Leap states that sometime in the 1860s or early 1870s, a group of 75 Apache warriors were cornered by US Army troops or civilian volunteers at the edge of a steep escarpment east of Superior (Barnes 1988; Farish 1918; Thrapp 1967:137). Rather than surrender, the Apache chose to leap off the cliff to certain death. By 1882, the escarpment was known as “Apaches Eternal Leap” (Cox 1882), which over time was shortened to Apache Leap. This popular legend has become part of the historical fabric of Arizona, and versions of the tale have been told for generations. There is no definitive historical documentation of the incident (Thrapp 1967:137). However, most scholars of Arizona history concede that there is probably a grain of truth in the legend (Buckles 2007; Thrapp 1967:137). Over the years, the legend has morphed into a commercial gimmick that is used to sell “Apache Tears” (obsidian nodules) to tourists in Superior (Buckles 2007).

The first significant Anglo-American presence in the western Pinal Mountains was in July 1870, when a military camp was established near Tordillo (or Tordilla) Peak (Alexander 1998). This peak was called Picket Post Camp by the troopers. One account suggests that this name was used because the troopers' horses were picketed there while they looked for Apache camps in the Pinal Mountains (Barnes 1988). From Picket Post, General George Stoneman ordered the construction of a trail into the Pinal Mountains, subsequently known as Stoneman's Grade, in order to pursue the Western Apache into the rugged mountains east of the Gila Valley and to open the area up for mining. The soldiers started the trail at the foot of Picket Post Mountain and built it up to the headwaters of Picket Post Creek (later called Queen Creek). They then extended it across what the soldiers called Devils Canyon. A military post named Infantry Camp was established in November 1870 in Mason's Valley and was subsequently renamed Camp Pinal (Alexander 1998; Barnes 1988). General Stoneman was replaced by General George Crook in June 1871. He soon ended the use of Camp Pinal by the military (Alexander 1998; Thrapp 1967). The reason for General Stoneman's removal is not clear. He may have been replaced because of his overall responsibility as commander of the Military District of Arizona for failing to prevent the Camp Grant Massacre in April 1871 in which over 100 members of the Pinal and Aravaipa bands of the Western Apache living near the camp were murdered by members of the Papago tribe (the modern-day Tohono O'odham) led by leading Anglo and Mexican settlers from Tucson (Colwell-Chanthaphonh 2007). Or it could be that he spent too much time building roads, surveying the territory, and dealing with administrative duties and not enough time subduing the Apache.

General Crook was an effective military leader who destroyed the food stores and fields of hostile Apache and employed Apache scouts to find them in their mountain fastness (Thrapp 1967). Soon after he was appointed commander of the US military in the Arizona Territory, General Crook issued an ultimatum to all Apache that they must report to their assigned reservations by February 1872. Toward the end of 1872, Crook began a campaign to round up those groups that had not submitted to his demand (Thrapp 1967). By 1875, all the Western Apache had been sent to live on the San Carlos Apache Reservation near the confluence of the San Carlos and Gila Rivers, where their descendants live to this day.

General Crook's Apache campaigns of 1872 and 1873 opened the way for further Euroamerican settlement in the Pinal Mountains. The first major ore body discovery in the Western Pinal Mountains was made in 1871 south of Stoneman's Grade by several miners who had been soldiers under Captain Kerr (Woody and Schwartz 1977). They recorded a number of claims in late 1871 called, collectively, the Silver Queen Ledge, which eventually became the Silver Queen Mine and the future location of the Magma Mine 30 years later (Walker and Chilton 1991). While the Silver Queen Mine was technically the first registered set of mine claims, it was only discovered after a fruitless search for a far richer mine—the fabled Silver King Mine (Woody and Schwartz 1977).

The story behind the discovery of the Silver King Mine is that in 1871 a Gila Valley rancher named Charles G. Mason was shown a piece of pure silver by John Sullivan. Sullivan, a soldier, had found the silver while working on Stoneman's Grade. Unfortunately for Sullivan, while Mason was interested, no one else wanted to mount an expedition into Apache territory at the risk of their lives. Sullivan eventually left Arizona in late 1874 or 1875 to seek a milder climate (Woody and Schwartz 1977). Prior to his leaving the territory, Mason talked him into giving directions to the ore in exchange for some cash, a pair of boots, and other goods (Woody and Schwartz 1977). Later that year, Mason went to investigate the

area near Stoneman's Grade with a party of miners on their way back from working the Globe Ledger claim (Haak 1991:33). Based on the directions given to Mason—that the spot was a “stone's throw” away from a large prominent boulder near Stoneman's Grade—the ore that would become the famed Silver King Mine was finally rediscovered (Woody and Schwartz 1977). The four prospectors filed their claims in Florence, and within 6 months, 50 men were working at the Silver King Mine (Haak 1991:33). In 1877, the original prospectors sold out to the Silver King Mining Company headed by George Barney (Haak 1991). The Silver King Mine became one of the richest mines in Arizona history, generating over 6 million dollars in silver between 1877 and 1886 (Haak 1991). During the same period, mines in the eastern portion of the Pinal Mountains within the Globe Mining District were also producing rich silver and copper ore (Bigando 1989).

The land in the Pinal Mountains was also attractive to ranchers and, to a lesser extent, farmers, who began to settle the area in the 1870s. Robert A. Irion, a rancher and farmer from Colorado, occupied Camp Pinal in 1878 with his family and renamed it Pinal Ranch (Craig 1975). Irion had learned about the area from his friend Charles G. Mason, the prospector (Craig 1975). Pinal Ranch is located in the beautiful oak-filled alluvial basin surrounded by lofty peaks that became known as Mason's Valley (Barnes 1988). The basin has also been known over the years as Irion's Flat, Sutton Summit, and Top of the World. Pinal Ranch became an important stop for travelers on the Globe-to-Superior pack trail and was an important source of fresh fruit in the area (Cox 1882; Craig 1975; Goodman 2003b).

The town that developed around the Silver King Mine was initially called Happy Hollow Camp. This was later changed to Silver King. Another boomtown, Pinal, grew up around the stamp mill at the base of Picket Post Mountain along Queen Creek. The Picket Post post office was established in 1878 and the name was changed to Pinal or Pinal City in 1879 (Barnes 1988). Pinal in its heyday in the early 1880s had as many as 2,000 residents and contained 123 buildings (Barnes 1988; Wood 1979). The Silver King Mine closed in 1888 and was essentially abandoned by 1891. This was due to a decrease in the quality of the silver ore produced by the mine, which was compounded by a sudden drop in the price of silver on the world market (Haak 1991; Wood 1979). The town lives on in popular novels written in the early 1900s by the noted western writer Dane Coolidge.

The development of the Silver Queen Mine followed a different course. The settlement around the claims was briefly known as Queen, but renamed Hastings by 1882 (Cox 1882; Walker and Chilton 1991). This town did not flourish as the towns of Silver King and Pinal had, probably because the Silver Queen's silver ore deposits were not as rich as the Silver King's and were played out by the early 1880s. The lack of significant silver deposits at the Silver Queen Mine, the demise of the Silver King Mine in 1888, and low silver prices led to ranching becoming the primary economic activity in the region for the final years of the nineteenth century. In the first years of the twentieth century, George Lobb, Sr., a former level boss at the Silver King Mine, worked some claims around Hastings known collectively as the Golden Eagle Group (Walker and Chilton 1991). The operation quickly collapsed, but when copper became a viable commodity around the turn of the century, the old Silver Queen Mine regained its value due to its large copper deposits. Sustained growth began in 1902 with the purchase of the Golden Eagle Group by the Lake Superior and Arizona Mining Company (L.S.&A.), and a townsite was laid out by Lobb, who named the town Superior after the L.S.&A. (Walker and Chilton 1991). No copper deposits were present

at the Silver King Mine, and it was forgotten throughout most of the twentieth century. In 1996, it was reopened for silver mining by the Deen family (San Felice 2006:316).

William Boyce Thompson and his partner George Gunn acquired interests in the Silver Queen Mine in 1910 for \$130,000 and renamed it the Magma Mine. This mine is known today as the first air-conditioned mine in North America (ASME website; Walker and Chilton 1991). A large concentrator was built in 1914 to efficiently process the ore. The Magma Arizona Railroad (MARR) was completed in 1915 to provide an efficient means of transporting the ore from the Magma Mine to a spur of the Southern Pacific Railroad near Florence. This stimulated population and economic growth in Superior, which lasted into the 1970s. The MARR was originally built as a narrow-gauge line, but was later replaced with standard-gauge rail in 1922–1923. The main function of the MARR was to transport processed materials from the mines in Superior, although limited passenger and cattle transport services were also provided. The MARR was unique in that its steam operations lasted decades after other railroads had converted to diesel-powered locomotives.

Periods of boom and bust in the mining industry followed throughout the remainder of the twentieth century. The construction of the Globe to Superior segment of U.S. 180 (later U.S. 60) in 1922 stimulated economic activity in the Pinal Mountains and facilitated the transport of goods into a previously isolated portion of Arizona. Later, the Strategic Minerals Act of 1939 helped spur prospecting and mining activity in the Pinal Mountains during the military-industrial buildup prior to World War II (Goodman 2003a:961). An interesting side note to the historical activities in the area during the 1930s was the presence of work programs sponsored by the Civil Works Administration. The New Deal of the 1930s was enacted by the federal government to employ citizens by putting them to work on federally sponsored road improvement projects, trail improvement projects, and other activities on National Forest System lands. A significant Civilian Conservation Corps camp is located at the Oak Flat campground east of Superior (Wright 1993).

ARCHAEOLOGICAL BACKGROUND OF THE PROJECT AREA

The preceding discussion presents the big picture of the cultural events and developments during prehistory and history that affected human populations in central and southern Arizona. The objective of this section is to establish the relevance and representation of this culture history in the context of the current archaeological survey. Previous archaeological studies in the geographic region encompassing the project area are the source of this information.

The current project area is located in an area generally known as the Pinal Mountain Highlands. This area is characterized by rugged mountainous terrain and steep canyons. Looking at watercourses as possible routes of human population movement, interaction, and communication, the drainages provide possible cultural tethers southward and westward to the Hohokam heartland along the Gila River near Florence and Coolidge and along the Salt River near Phoenix; and northward and eastward to the Mogollon, Hohokam, and Salado culture centers in the Tonto Basin and Globe area.

Unquestionably, the most visible and widely scattered archaeological remains in the Pinal Mountain Highlands represent the Late Formative period (A.D. 1100–1450) expression of the Salado culture. The Salado culture is known in part for cobble and rock masonry architecture and distinctive styles of decorated pottery. Archaeological sites with cobble-masonry architecture are common (Clark and Vint 2004; Doyel 1978; Hohmann and Kelley 1988; Lindeman and Whitney 2005; Mitchell et al. 2002; Vickery 1936). The most notable archaeological investigations near the present project are Erich F. Schmidt's studies of Salado sites, particularly the large masonry pueblo of Togetzoge located in Mason's Valley near Superior. The Salado occupation in the area is expressed by large multi-room pueblos and small single-room sites. One broad, sweeping assessment that may be made about Salado sites is that they can be found just about anywhere across the landscape. This extensive footprint of the Salado culture is one overarching characteristic that distinguishes it from the preceding Hohokam culture.

Archaeological evidence from the Pinal Mountain Highlands also reveals the existence of a Hohokam culture presence in the region (Clark and Vint 2004; Doyel 1978; Lindeman and Whitney 2005; Mitchell et al. 2002; Vickery 1945). The Hohokam culture sites date predominantly to the Middle Formative period (A.D. 700–1100) and seem to reflect an expansion of the Hohokam culture from the heartland to the west. The Pinal Mountain Highlands were settled at the same time that Hohokam culture settlements were established in the Tonto Basin to the north, the Gila River area near the San Pedro River confluence to the south, and the Globe area to the east (Clark and Vint 2004; Doyel 1978; Haury 1932; Mitchell et al. 2002; Vickery 1945). The initial Hohokam culture presence in these areas is indicated by sparse but persistent occurrences of Snaketown Red-on-buff pottery diagnostic of the late Hohokam Pioneer period (A.D. 650–750), but substantial settlements are present by the early Colonial period (A.D. 750–850). Unlike the later Salado culture footprint, the Hohokam footprint is typically focused along the alluvial plains and fans associated with streams and rivers. This seems to reflect the Hohokam focus on floodplain agriculture that often relied on canals, ditches, and other means of diverting water flow. The Hohokam footprint away from these alluvial plains and fans is light and reflects Hohokam forays into the hinterlands in pursuit of plant and animal resources.

Very little is known about the region before the Hohokam. Archaeological evidence of Paleoindian era or Early and Middle Archaic period sites is extremely rare. So much so that nothing specifically can be contributed to the preceding discussion. The current standing of the Late Archaic and Early Formative period cultural presence in the area is not quite as dire as the preceding cultural horizons, but these periods are not well represented in the archaeological record of the region either. Some of this probably represents the fact that only recently have archaeologists recognized how Late Archaic and Early Formative period culture characteristics are expressed on the landscape. To the north, excavations in the Tonto Basin in the past couple of decades have established clear evidence of occupation during the Early Formative period (Clark and Vint 2004; Elson and Lindeman 1994). Similarly, relatively recent excavations along the Gila River near Winkelman have identified archaeological expressions of Late Archaic and Early Formative period cultures (Clark 2000). Furthermore, recently completed excavations by Statistical Research, Inc., along U.S. 60 west of the project area uncovered a Late Archaic or Early Formative period settlement along the banks of Queen Creek. Although not well known for the Pinal Mountain Highlands and the immediately adjacent areas, it seems likely that continued research will reveal additional evidence of human adaptation and use of the area before the Hohokam culture tenure.

The Apache presence in the western Pinal Mountains during the protohistoric and historical eras has been confirmed through archaeological surveys, ethnographic studies, and native oral traditions (Goodwin 1942; Lindeman and Whitney 2005; MacNider and Effland 1989). However, an Apache presence on the landscape is often hard to detect archaeologically due to the ephemeral nature of Apache sites. The placement of storage caches and burial niches in nearly inaccessible places by the Apache likewise inhibits detection of Apache sites (Lindeman and Whitney 2005). The higher-elevation areas in the Pinal Mountains were used to gather wild plant foods and hunt large animals during the warm months, and most of the Apache sites in these mountains are related to resource procurement and processing. The Apache often reoccupied prehistoric sites dating to the Late Formative period (Lindeman and Whitney 2005). The western and southern flanks of the Pinal Mountains were lived in during the winter months, and it was from there that raiding parties were sent off to the Pima, Tohono O’odham, Anglo, and Mexican communities (Goodwin 1942). A camp used to stage attacks on these groups is located at the top of Apache Leap (Lindeman and Whitney 2005).

Historical mining activities are represented on the landscape by various types of mineral exploration and mining features (Goodman 2003a; Lindeman and Whitney 2005). These features range from small hand-dug test pits to extensive mine workings within the Pinal Mountains. In relation to the project area, the most extensive mining activity has occurred west of Apache Leap and southeast of Five Point Mountain. Nevertheless, numerous examples of small-scale operations as well as the ubiquitous mining cairn dot the landscape around the project area. Perhaps the most significant archaeological investigation of historical mining in the Pinal Mountains was the Carlota Copper Mine archaeological project (Goodman 2003a).

Ranching in the Pinal Mountains has been ongoing since the late 1870s, and ranching-related features such as cattle tanks, ranch roads, and stone cattle fences dot the landscape. Although little archaeological work has been performed on historical ranch sites in the Pinal Mountains, information on specific ranch operations is generally available from historical records (see Goodman 2003b for some information on ranches in the Pinal Mountains). Cultivation of fruit trees has also been important in the history of the Pinal Mountains (Craig 1975).

Few archaeological studies have been conducted specifically within the project area or the immediately surrounding area, but two projects are noteworthy. In 1977, personnel from the Museum of Northern Arizona (MNA) surveyed the proposed route of the SRP Silver King to Kyrene East End Transmission System (Keller 1978; Yablon 1978a, 1978b). This survey identified two sites that are shown to be within the present project area. According to the records on file at the ASM, NA15692 is reported to be a mining site with a stone feature interpreted as an ore-crusher foundation. The other site, NA15722, is a prehistoric Native American agricultural site with several linear rock alignments and two rectangular stone structures. NA15722 was located just west of Tower 23. This is critical in identifying the location of both NA15722 and NA15692. Following this survey, MNA conducted archaeological excavations at NA15722 prior to the construction of the SKKEETS.

Between October 1993 and February 1994, SWCA conducted an archaeological survey of the Eastern Mining Area transmission system. This survey, which crosses the present project area in two places, identified a single archaeological site in the vicinity of the present project. This site, AZ U:12:74(ASM), is a rock shelter with a scatter of Historic period artifacts. The shelter was apparently used as a habitation.

The project area is located amongst the townships of Silver King, Superior, and Pinal. Historic period maps of the area show that the original military trail, Stoneman's Grade, and a later wagon road between the townships of Pinal and Silver King followed the course of Silver King Wash to the west of the project area. Historic era maps also reveal that by 1901 mining was occurring in the area.

SURVEY EXPECTATIONS AND SURVEY PLAN

Based on the environmental setting and archaeological background of the project area, WestLand anticipated the probability of finding archaeological sites relating to prehistoric Native American occupation and use of the area; perhaps protohistoric or early historical Native American use of the area; and Historic period Euroamerican activities most likely related to mining.

SURVEY OBJECTIVES

WestLand's objectives for the current survey were 1) to determine if there were any previously unrecorded cultural properties within the project area, 2) to perform and document a complete inventory of all cultural resources in the project area, and 3) to evaluate and recommend treatment for all historic properties potentially eligible for inclusion in the NRHP. To accomplish these goals, the following specific research objectives were established:

1. Identify and record all archaeological resources.
2. Distinguish between isolated archaeological finds and archaeological sites.
3. Define the spatial extent and archaeological content of all archaeological sites based on land ownership and access permissions.
4. Determine as specifically as possible the cultural affiliation and chronological placement of each archaeological find.
5. Propose a functional classification for each archaeological find based on what is currently known about the archaeological cultures of the region and the archaeological materials observed.
6. Address research questions based on field findings.

METHODS

This archaeological project consisted of three sequential tasks: 1) background research, 2) a field survey, and 3) preparation of this final report. These tasks are described below.

TASK 1. BACKGROUND RESEARCH

Prior to fieldwork, an archaeological overview of the project area and its immediate environs was conducted. Specifically, WestLand archaeologists reviewed existing archaeological information in the site files at the ASM and on the ASM online AZSITE database. A study area was defined that was larger than the project area that included the project area and a surrounding 1.6-kilometer (1-mile) buffer, its purpose to place the archaeological resources located within the project area into context with those resources in the immediate vicinity. In addition to the first-hand search of ASM records, WestLand requested a database from the ASM containing the AZSITE records for all known sites in the study area. This database contains all the documented information about each site. Available General Land Office (GLO) maps, land ownership records administered by the Bureau of Land Management, historical Pinal County road maps, historical mine plats, and historical aerial photographs were also examined for information pertinent to identifying archaeological resources in the project area.

TASK 2. FIELD SURVEY

The survey methods were influenced by the nature of the expected archaeological resources and the character of the landscape. WestLand's archaeologists conducted a pedestrian archaeological survey within the project area by walking transects back and forth across the project area at 20-meter intervals until the entire area had been examined for archaeological resources.

The initial expectation was that much of the evidence for human use of the area would reside in archaeological artifacts, features, and sites attributable to Hohokam (or Formative) and Historic period land-use patterns. Thus field methods focused on collecting basic information about the individual artifacts, features, and sites, including their age, cultural affiliation, associated material culture, and presumed function, as well as basic metric data. Survey methods were also influenced by the expectation that sites, particularly Historic period sites, are often masked or obscured by modern ongoing use. Archaeologists reviewed historical maps and aerial photographs prior to the field survey to identify Historic period features on the landscape that might still exist as archaeological sites. These potential finds were "ground-proofed" by the archaeologists.

Field observations were recorded on standardized forms and later entered into WestLand's Archaeological Information Management System for analysis.

ASM Site Criteria

Evidence of past human activities exists on the landscape in objects, sites, districts, buildings, and structures. The archaeological survey initially identified two types of resources: archaeological artifacts and archaeological features. The former category consists of individual portable objects on the landscape. The latter consists of a variety of archaeological resources, from clusters of two or more objects in close

proximity to one another to more substantial debris scatters and non-portable purposeful constructions, excavations, and deposits.

Every archaeological resource encountered was mapped and recorded, including individual artifacts, individual features, artifact scatters with or without features, and groupings of features. The ASM provides guidelines that identify what is minimally considered an archaeological site. An archaeological site is a special subset of archaeological features that meets at least the minimum criteria. Upon initial discovery of an archaeological artifact or feature, the archaeologists would examine that find to determine whether other associated archaeological materials were present. If the find was an individual occurrence, it was classified as an isolated occurrence and documented accordingly. Its location was mapped and its characteristics were recorded on field forms.

If multiple artifacts or features were found, the following ASM guidelines (1995) were applied to determine whether the archaeological find should be designated and recorded as an archaeological site. According to the ASM, a site is any:

1. Physical remains of past human activity that are at least 50 years old.

Additionally, sites should consist of at least one of the following:

2. 30+ artifacts of a single class (i.e., 30 sherds, 30 lithics, 30 tin cans) within an area 15 m (50 ft) in diameter, except when all pieces appear to originate from a single source (i.e., one ceramic pot, one core, one glass bottle).
3. 20+ artifacts which include at least 2 classes of artifact types (i.e., sherds, ground stone, nails, glass) within an area 15 m (50 ft) in diameter.
4. One or more archaeological features in temporal association with any number of artifacts.
5. Two or more temporally associated archaeological features without artifacts.

All resources satisfying these minimum criteria were designated as archaeological sites and recorded as specified in the ASM site recording manual (ASM 1993). Archaeological features that did not meet these criteria were designated as isolated features and recorded accordingly. Within the boundaries of the archaeological sites, WestLand archaeologists used the following categories to characterize artifact density:

- **Light Density:** 0 to 3 artifacts of any class per 1 m²
- **Moderate Density:** 3 to 7 artifacts of any class per 1 m²
- **High Density:** 7 or more artifacts of any class per 1 m²

Site recording generated the following records: written descriptions, scaled hand-drawn maps, photographs, and electronic data collection with a Trimble Geoexplorer. A primary site datum (PSD) marked with an aluminum tag was placed at each site. UTM coordinates were electronically recorded for each PSD with sub-meter accuracy and initialized to the NAD83 CONUS datum. Site boundaries were

established by the distribution of artifacts and features. Within each archaeological site, the locations of the features and diagnostic tools were mapped. For each newly discovered site, an ASM site number was obtained from the ASM Site Files Office (University of Arizona, Tucson) and an ASM site card was completed and returned to ASM for entry into their site file records and database (AZSITE).

Artifact and Feature Documentation

All non-site archaeological artifacts and isolated features were designated as isolated occurrences. By definition, an object or feature is considered archaeological when it is more than 50 years old. Many artifacts of glass, metal, and synthetic material lack diagnostic characteristics to indicate their age. Because these are abundant in areas around modern settlements and in areas frequently visited for hunting, camping, and other forms of recreation, it is impractical to map and record all glass, metal, and synthetic materials. These industrial-age artifacts were identified as isolated archaeological resources only when clear diagnostic evidence established that they were over 50 years old. The location of each isolated archaeological find was recorded with a hand-held GPS unit. To the extent possible, the isolated finds were categorized into conventional typological categories and attributed to an archaeological culture and chronological period.

Data were consistently collected, regardless of whether an artifact or feature was associated with a site or considered an isolate. Artifacts were described and classified into rudimentary typological categories based on material, form, and manner of decoration. Artifacts representative of each type were drawn or photographed. Stone artifacts were initially assigned to one of three categories: flaked stone, ground stone, or fire-affected. Flaked stone artifacts were further categorized as either debitage or tools. Lithic raw material types were recorded for all observed pieces of flaked and ground stone, if possible. Stone tools were classified to basic quasi-functional-descriptive categories such as biface, projectile point, flaked tool, pebble tool, core/tool, mano, metate, or indeterminate. Additional comments were recorded about whether the tool may have been a scraper, denticulate, handstone, mano, slab metate, basin metate, or trough metate. Glass, metal, and other industrial-made artifacts were similarly classified. Key diagnostic traits were recorded and any diagnostic markings or embellishments were photographed, sketched, or transcribed.

Archaeological features were documented in a consistent manner whether or not they were associated with a site or occurred as isolates. Features were classified into descriptive and quasi-functional categories, described, and measured. Descriptions included notes on the form, composition, material, and construction technique. Most features were drawn and photographed except when vegetation or other impediments prevented the archaeologists from doing so.

TASK 3. FINAL REPORT

This final report of the site files and records search and field investigation has been prepared in accordance with the reporting standards established by the Arizona State Land Department and the ASM.

RESULTS

SITE FILES SEARCH

Seven cultural resource inventories have been conducted within the project area or in the immediate vicinity. Three of these are electrical transmission line surveys, one is a road survey for the emergency escape ramp on U.S. 60 east of Superior, one is a survey for a proposed industrial park west of Superior, one is a survey on the Tonto National Forest (TNF) for a federal land exchange, and one is a survey of a mining claim on TNF lands (**Table 1; Figure 4**). The locations of most of these projects are not shown in **Figure 4**. The ASM and TNF site files document 22 previously recorded cultural resource sites within the project area or the 1.6-kilometer (1-mile) buffer (**Table 2** [over], **Figure 4**). These sites represent prehistoric Native American, Historic period Apachean, and Historic period Euroamerican activities in the area. Two sites are reportedly located within the project area (*see Table 2, Figure 4*). These two sites represent prehistoric Native American habitation and agricultural activities and Euroamerican mining.

Table 1. Previously recorded archaeological projects within 1.6 kilometers (1 mile) of the project area

Project No.	Project Name	Company
1989-93.ASM 1	Superior Escape Ramp	Archaeological Research Services, Tempe
1998-375.ASM 2	Town of Superior Industrial Park	David S. Boloyan, Archaeological Services
TNF-1978 3	Lake Side-Superior Land Exchange	TNF
TNF-2000 4	Archaeological Evaluation of three sites for the Goldfield Silver King 230 kV Transmission Line, near Superior	SWCA, Phoenix
TNF-2004 5	Archaeological Survey of the Farlea Mining Claim near Silver King	Northland Research, Tempe
A-77-154? A-77-159? 1 6	SRP Silver King to Kyrene East End Transmission Line	Museum of Northern Arizona
1993-369.ASM 2 7	EMA Survey	SWCA, Phoenix

Note: The projects **within the project area** are numbered separately at the end of the table.

HISTORICAL MAP REVIEW

WestLand archaeologists and cartographers reviewed several historical maps of the area to identify historical roads. These maps include:

- 1882 Topographical Map of Pioneer Mining District (Cox 1882)
- 1901 USGS Florence 30' quadrangle
- 1919 Plat of the Claim of the Magma Chief Copper Company known as the Gerald Cansler in Pioneer Mining District, Pinal County, Arizona (Goetz 1919)
- 1926 GLO map for T1S R12E (Kinsey and Vander-Meer 1926)
- 1948 USGS Superior 7.5' quadrangle
- 1949 Pinal County General Highway Map
- 1949 USGS Superior 7.5' quadrangle, photo revised 1981

Figure 4 Removed: Sensitive Data

Table 2. Previously identified archaeological sites within 1.6 kilometers (1 mile) of the project area

Site No.	Cultural Affiliation
AR-03-12-02-144(TNF) 1	Historic Euroamerican
AR-03-12-02-145(TNF) 2	Historic Euroamerican
AR-03-12-02-149(TNF) NA15718(MNA) 3	Prehistoric Native American
AR-03-12-02-159(TNF) 4	Prehistoric Native American Historic Euroamerican (Silver King Siding, Happy Camp)
AR-03-12-02-178(TNF) 5	Unknown
AR-03-12-02-405(TNF) 6	Historic Euroamerican
AR-03-12-02-567(TNF) 7	Historic Euroamerican (Silver King Road)
AR-03-12-02-1264(TNF) 8	Historic Euroamerican
AR-03-12-02-1529(TNF) 9	Historic Euroamerican (Pike's Camp)
AR-03-12-02-1530(TNF) 10	Historic Euroamerican Civilian Conservation Corps checkdams
AR-03-12-02-1913(TNF) 11	Historic Native American: Apache
AZ U:12:31(ASU) 12	Not recorded
AZ U:12:74(ASM) 13	Prehistoric Native American Historic Euroamerican
AZ U:12:77(ASM) AR-03-12-02-1242(TNF) 14	Prehistoric Native American Historic Euroamerican
AZ U:12:160(ASM) 15	Historic Euroamerican
AZ U:15:388(ASM) AR-03-12-02-146(TNF) 16	Prehistoric Native American Historic Euroamerican
AZ V:5:198(ASM) AR-03-12-02-1403(TNF) 17	Historic Euroamerican
NA15690(MNA) 18	Prehistoric Native American Historic Euroamerican
NA15691(MNA) 19	Historic Euroamerican
NA15784(MNA) 20	Prehistoric Native American
AZ U:12:218(ASM) 21	Historic Euroamerican
NA15722(MNA) 22	Prehistoric Native American

Notes:

- The sites **within the project area** are numbered separately at the end of the table.
- Acronyms: ASM – Arizona State Museum; MNA – Museum of Northern Arizona; TNF – Tonto National Forest

Review of the historical maps identified possible Historic period archaeological resources in the project area. The northern end of the project area falls within the Gerald Cansler mining claim (Kinsey and Vander-Meer 1926). The plat of this claim (Mineral Survey 3483) was filed in the U.S. Surveyors General Office on May 28, 1919, and the survey was completed on April 14, 1918 (Goetz 1919). Records indicate that the improvements on the claim included five cuts, two shafts, and a tunnel, valued at \$690. The map also has a notation for a house and a well. The plat map for the Gerald Cansler claim shows that

the claim is bordered on the northwest, northeast, and southeast by unknown claims and on the southwest by the unsurveyed Roland claim.

A review of the 1901 USGS Florence 30' quadrangle map shows a trail that crosses the present project area from southeast to northwest. This trail was part of a cutoff from Superior to Silver King Road.

FIELD SURVEY

WestLand identified two archaeological sites and 38 isolated archaeological finds (*Figure 5*). The sites are described below. The isolated finds are listed in *Table 3* and are discussed here. Many of the isolated finds lack any direct evidence that they are archaeological, but most of them are mining-related features found at the northern end of the project area, south of the Gerald Cansler claim.

Table 3. Isolated archaeological finds

Field No.	Type	Description
2	Artifact	Flaked stone, debitage
3	Feature	Cairn; 2.5 × 1.5 × 1.25 ft; unknown age
4	Feature	GLO survey monument, brass cap; 1946
5	Feature	GLO survey monument, brass cap, triangulation point associated with Feature 4; 1946
6	Artifact	Glass; bottle break; 12 shards aqua-colored; 12 × 5 ft; oriented east, southeast
7	Artifact	Metal Log Cabin syrup can; house-cabin shaped
8	Feature	Artifact scatter, including hammered-aluminum pitcher with steel handle, white-enameled metal mixing bowl, clear decorative glass shard, sanitary can; 25 × 2 ft; oriented east
9	Artifact	Glass; bottle break; 6 shards aqua-colored; crown rim; stretch marks on neck; 5-ft diameter
10	Feature	Road; unimproved dirt; 15 to 18 ft wide
11	Feature	Earthen berm across Feature 10; 45.5 × 15 × 3 ft
12	Feature	Earthen berm across Feature 10; 25.5 × 6 × 2 ft
13	Feature	Cairn; 3 × 3 × 1 ft; age unknown
14	Feature	Cairn; 3.5 × 3 × 1.75 ft; age unknown
16	Feature	Cairn; 5 × 4.5 × 2.25 ft; age unknown
17	Feature	Prospect; 13 × 10 × 1.5 ft; age unknown
18	Feature	Road; unimproved; 10 to 12 ft wide
19	Artifact	White enamel metal bowl; 13.25 × 5 in; part of Feature 8
20	Artifact	Hammered-aluminum pitcher with steel-strap handle; 18 × 6.5 in; part of Feature 8
28	Feature	Cairn; 6 × 5 × 1.25 ft; unknown age
29	Feature	Pipeline; 1-in buried iron pipe; partially exposed
34	Feature	Open excavation or trench; 127 × 10–12 × 6 ft
35	Feature	Cairn; 5 × 5 × 2 ft; with fallen wood, 6 × 6 in, post; unknown age
36	Feature	Cairn; 3.5 × 2 × 1 ft; unknown age
37	Feature	Prospect; 12 × 9 × 9 ft; excavated laterally into wash; unknown age
38	Feature	Pipeline; 1-in buried iron pipe; partially exposed
39	Feature	Pipeline; 1-in buried iron pipe; partially exposed
40	Feature	Pipeline; 1-in buried iron pipe; partially exposed
41	Feature	Trail along wash; 6 ft wide; cut into slope
42	Feature	Road or bulldozer push; 12 ft wide; berms alongside are 6 ft wide and 2 ft tall
43	Feature	Cairn; 5 × 5 × 3 ft; unknown age
55	Artifact	Zinc-plated sheet metal
56	Feature	Cairn; 5 × 5 × 3 ft; square wooden post in center; unknown age
57	Artifact	Ground stone; netherstone; local tabular metamorphosed limestone with a pecked and ground area on one side
58	Feature	Road crossing utility corridor
60	Feature	Cairn; 2.5 × 2.5 × 1 ft; with square wooden post and aluminum tag; modern
61	Feature	Cairn; 2.5 × 2.5 × 1 ft; with square wooden post and aluminum tag; modern
62	Feature	Cairn; 4 × 3 × 1 ft; collapsed; unknown age
63	Feature	Cairn; 6 × 4 × 0.8 ft; collapsed and scattered; unknown age

Figure 5 Removed: Sensitive Data

The isolated finds consist of eight artifacts and 30 features. Only two isolated finds, a flaked stone artifact and a netherstone, can be attributed to prehistoric Native American cultures. All the other isolated artifacts and features are attributed to Euroamerican activities in the area. The six isolated Historic period artifacts identified are bottle breaks (n=2), a house-shaped Log Cabin syrup can (n=1), a hammered-aluminum pitcher with a strap-iron handle (n=1), a white-enameled metal mixing bowl (n=1), and a piece of sheet metal (n=1). The pitcher and the mixing bowl are part of an artifact scatter (Isolated Feature 8) that also includes a sanitary steel can and fragments of a decorative glass container, possibly a flower vase. The other 29 isolated features are attributable to the Historic period, but none are definitively archaeological.

The most common isolated feature is the rock cairn (n=14). The ages of these are modern or unknown, but most are probably related to mining in the project area. Mining claims are shown to the east of the project area as early as the *1882 Topographical Map of Pioneer Mining District* (Cox 1882) and, as noted, the northern end of the project is located within the Gerald Cansler claim (Patent 857949; Mineral Survey No. 3483) and the unsurveyed Roland claim. Some of the cairns also appear to be associated with the surveys of the electrical transmission lines.

The next most common isolated features are roads or trails (n=5) and pipelines (n=4). The 1901 USGS Florence 30' quadrangle map shows a cutoff trail from Superior to Silver King Road. Features 10 and 58 approximate the location of this road. No artifacts are associated with either road to suggest that they were used in the early 1900s. Feature 10 is blocked by two earthen berms (Features 11 and 12). Feature 58 parallels the fence that bounds the active mining area and has been bulldozed. Another road, Feature 18, is a spur that connects the present alignment of Silver King Road (AZ U:12:217[ASM], see site description below) with the older route of Silver King Road (AR-03-12-02-567[TNF]). Nothing was observed in the field to indicate that this road is archaeological, and no indications of the road were shown on the Historic period maps. A trail (Feature 41) and a short road segment (Feature 42) are probably related to mining and provided access along a wash to prospects and excavations.

Four pipelines were observed during the survey. All were exposed sections of buried 1-inch iron pipe. These appeared to follow the washes; most were located in the wash bottom, with some of the longer exposed sections along the edge of the wash. Three open excavations, prospects, or trenches were observed.

Two features identified are a GLO survey monument and an associated triangulation monument. Both are brass caps and are stamped with the date 1946.

NA15722(MNA)

WESTLAND FIELD SITE NUMBER: None assigned

CULTURAL AFFILIATION: Prehistoric Native American

AGE: Late Formative, A.D. 1150–1450

SITE TYPE: Field house and agricultural fields

SITE SIZE: 110 by 40 meters

ELEVATION: 3,160 feet above mean sea level (amsl)

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY RECOMMENDATION: Unevaluated

SITE DESCRIPTION: NA15722(MNA) was discovered and excavated in preparation for the construction of the SRP SKKEETS electrical line (Keller 1978; Yablon 1978a, 1978b; Yablon and Weaver 1981:39–50). Originally, the site consisted of a two-room rectangular masonry structure and a series of nine checkdams or terraces. ASM records show this site as being within the present project area; however, the report on the excavations at the site show that it was located on the hill slope west of SKKEETS Tower 23 (Yablon and Weaver 1981, Figure 23). This tower is located west of the present project area ([see Figures 4 and 5](#)). A quick inspection of the site location revealed that there are few traces remaining.

AZ U:12:218(ASM) – NA15692(MNA)

WESTLAND FIELD SITE NUMBER: 50

CULTURAL AFFILIATION: Euroamerican

AGE: Historic, ca. 1918

SITE TYPE: Habitation: miner's cabin

SITE SIZE: 120 by 83 feet

ELEVATION: 3,150 feet amsl

NATIONAL REGISTER OF HISTORIC PLACES

ELIGIBILITY RECOMMENDATION: Eligible

SITE DESCRIPTION: AZ U:12:218(ASM) is the remains of a stone cabin associated with other features ([Figure 6](#)). The site was first discovered and recorded during the archaeological survey for the SRP SKKEETS electrical line that is just west of the present project area (Keller 1978; Yablon 1978a, 1978b). The structure was originally described as the foundation of a crusher related to ore processing, but is interpreted here as a cabin. The site is located near the center of the Gerald Cansler claim that was surveyed in 1918 (Goetz 1919). The plat description indicates that in 1918, there were five cuts, two shafts, and a tunnel on the property. The plat map also shows the location of a house and a well in the southeastern corner of the claim on the eastern side of a ravine ([Figure 7](#)). AZ U:12:218(ASM) is located near the center of the claim and is located on the western side of a ravine.



Photo 3. Overview of NA15692(MNA)

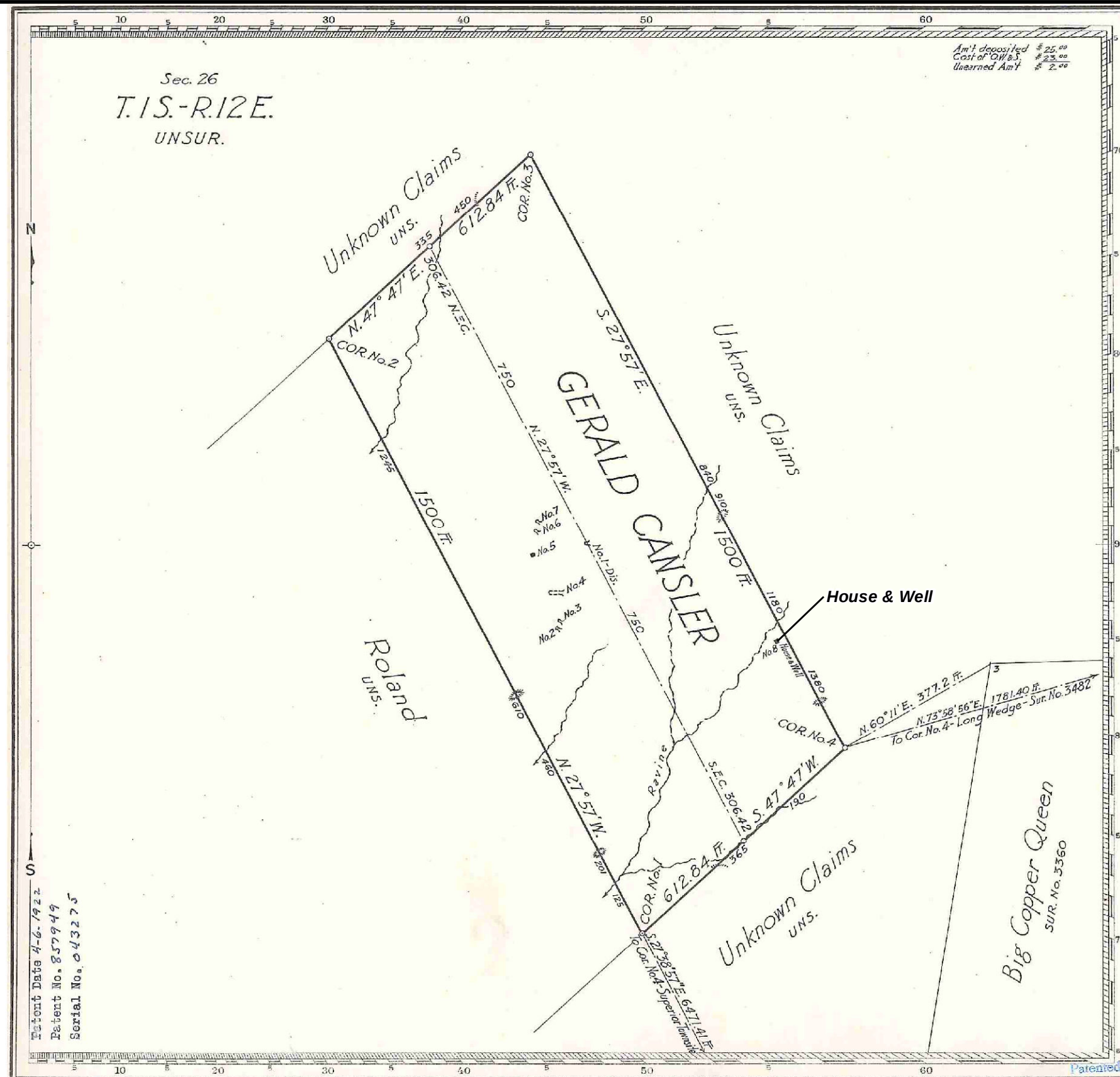


Photo 4. Overview of Feature 31

SITE SETTING: The site is located in a rincon to the side of a larger wash. The rincon is defined by a large, nearly vertical bedrock outcrop on the north and a steep hillside on the south ([Photo 3](#)). A retaining wall along the mouth of the rincon has held back sediment, creating a relatively flat, level area. The deep alluvium hosts a mesquite bosque. Other than the dense mesquite canopy, the vegetation in and around the site is typical of the project area.

FEATURES: Four features are defined at the site. Feature 31 is the remains of a stone cabin ([Photo 4](#)). The structure is built into the side of a hill overlooking a ravine. Approximately two-thirds of the walls are still standing. The upslope wall is intact and most of the side walls are still standing. The downslope wall has collapsed into the ravine and the rubble is visible on the slope. The standing walls are up to 5 feet-

Figure 6 Removed: Sensitive Data



Claim Located. Am'd - Feb. 3, 1917.

Mineral Survey No. 3483

Lot No. _____ Land District. Arizona

PLAT
OF THE CLAIM OF
The Magma Chief Copper Company

KNOWN AS THE
GERALD CANSLER

IN Pioneer MINING DISTRICT,
Pinal COUNTY, Arizona
Containing an Area of _____ Acres.
Scale of 200 Feet to the inch.
Variation 13° 40' E.

SURVEYED April 14, 1918 BY
William C. Goetz
U.S. Deputy Mineral Surveyor

The Original Field Notes of the Survey of the Mining Claim of
The Magma Chief Copper Company
known as the
GERALD CANSLER

from which this plat has been made under my direction,
have been examined and approved, and are on file in this Office,
and I hereby certify that they furnish such an accurate description
of said Mining Claim, as will, if incorporated into a patent,
serve fully to identify the premises, and that such reference is
made therein to natural objects or permanent monuments as
will perpetuate and fix the locus thereof.
I further certify that Five Hundred Dollars worth of labor has
been expended or improvements made upon said Mining Claim
by claimant _____ or its _____ grantors and that
said improvements consist of 5 cuts, 2 shafts & 1 tunnel,
total value \$690.00

that the location of said improvements is correctly shown
upon this plat, and that no portion of said labor or improve-
ments has been included in the estimate of expenditures
upon any other claim.
And I further certify that this is a correct plat of said Mining
Claim made in conformity with said original field notes of the
survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office. Frank D. Frost
Phoenix, Arizona, U.S. Surveyor General for
May 28, 1919 **ARIZONA**

Figure 7. Gerald Cansler Claim, GLO Mineral Survey No. 3483

5 inches tall. The interior measurements are about 13 by 9 feet. The walls are built from local rocks set with adobe mud and smaller chinking stones. In some places, the walls are double-rowed, but these are typically capped by larger rocks that served to bond the rows together. The walls are bonded at the corners. There is a dressed edge in the western wall 7 feet from the corner that appears to be a doorway opening into the rincon (*Photo 5*). A niche measuring 36 inches across and 32 inches deep is present in the southern (upslope) wall. This niche



Photo 5. Detail of door of Feature 31

appears to be a chimney flume; however, the interior is not sooted. This is probably the feature that was originally identified as the foundation for an ore crusher. It is interpreted here as a cabin.

Feature 46 is a cairn, 4.5 by 4.5 by 1.5 feet, at the foot of the rock face at the head of the rincon. Feature 52 is the exposed section of a buried 1-inch iron pipeline. Feature 48 is a long retaining wall, 106 by 2 by 3 feet, across the mouth of the rincon. Little of this feature is visible; most is covered by sediment and vegetation. From what is exposed, the feature appears to be a combination of well-stacked rocks similar to the construction of the cabin and a rock berm. The rock berm may not be wholly manmade and may be a natural gravel bar at the margin of the wash channel. Regardless of the construction, the retaining wall parallels the main wash and has retained approximately 3 feet of sediment. The top of the retaining wall is level with the floor of the cabin. The retaining wall has created a “yard” within the rincon; the doorway of the cabin opens toward this yard. Feature 49 is a rock pile, 7 by 6 by 2 feet. It is perhaps what is left of a stockpile used in the construction of the cabin and retaining wall.

MATERIAL CULTURE: Only two artifacts were observed at the site. Artifact 30 is the base of an aqua-colored bottle. The bottle is embossed: “ICE COLD STOR...” “S.CAL.” “BOTTLE IS NO...” The other item, Artifact 47, is a large square metal tray or tub measuring 42 by 42 by 9 5/8 inches on the interior. The bottom is solid metal. The top has a 7-inch flange on all sides.

SITE CONDITION: The site is in good condition. Approximately two-thirds of the cabin’s walls are still standing. The retaining wall has not been breached and the leveled “yard” created by the wall is still intact.

INTERPRETATION: The Gerald Cansler claim plat map shows a house and a well within the eastern portion of the claim. The map, if accurate, shows the house and well on the eastern side of a ravine. The present structure is located on the western side of the ravine.

AZ U:12:217(ASM) – Silver King Road

WESTLAND FIELD SITE NUMBER: 21

CULTURAL AFFILIATION: Euroamerican

AGE: Historic ca. 1948–present

SITE TYPE: Transportation: road

SITE SIZE: 25 feet wide; length not recorded

ELEVATION: 3,160 feet amsl

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY RECOMMENDATION: Not eligible

SITE DESCRIPTION: AZ U:12:217(ASM) is the current route of Silver King Road ([Figure 8](#)). The present road alignment follows that shown on the 1948 USGS Superior 7.5' quadrangle. This road is not shown on earlier maps. The original road from Pinal to Silver King follows the Silver King Wash that is to the west of the present alignment. This older route is located on TNF lands and has been assigned AR-03-12-02-567 in the TNF site inventory. To the northwest of the project area, the current alignment of Silver King Road joins with and follows the older alignment to the site of Silver King.

SITE SETTING: In the project area, the road follows the top of a narrow ridge ([see Photo 2](#)). Vegetation along the road is characteristic of the project area.

FEATURES: Two features are attributed to the road. Feature 22 is the current active roadbed. The roadbed is bordered on both sides by windrows from grading and shallow ditches for the drainage of surface runoff ([see Photo 2](#)). A second feature attributed to this site is Feature 15. This feature is peculiar because it parallels the current roadbed but is located higher up on the hillsides to the east. In places where Feature 15 descends the hillsides, the feature is



Photo 6. Feature 15 at AZ U:12:217(ASM)

gullied with a channel about 1.5 to 2 feet deep. In other places, where Feature 15 crosses the side of the hills, the feature is flat and has the appearance of a trail or road that is about 10 to 12 feet wide ([Photo 6](#)). Feature 15 has been truncated on the north by the construction of the pads for two of the SRP SKKEETS transmission line towers. These towers were built after 1981. Feature 15 is also truncated by the spur of another road, Feature 10. The location of Feature 15 aligns well with the route shown on the historical

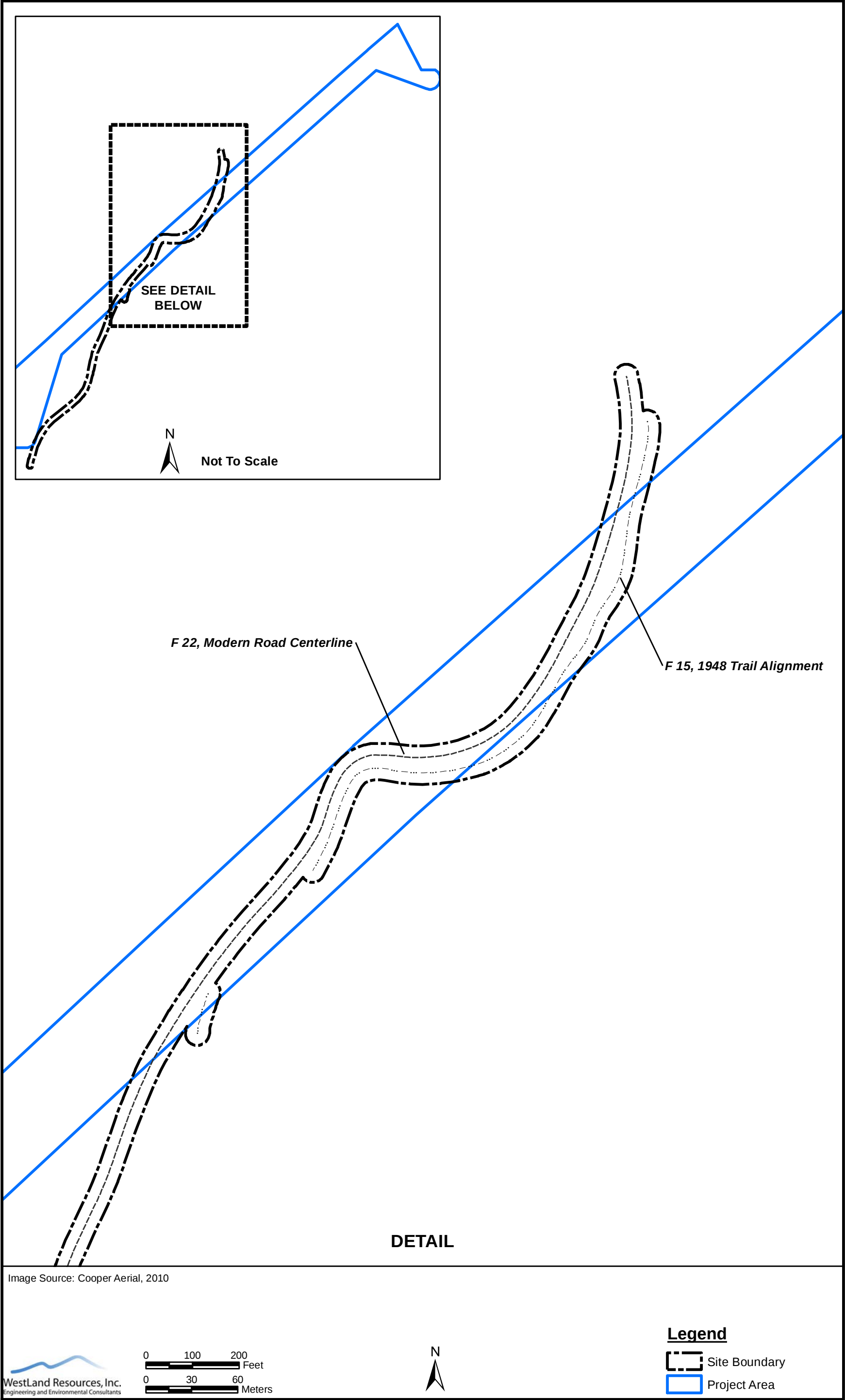


Figure 8. Silver King Road, 1948 (AZ U:12:217[ASM])

1948 USGS map and may be the original 1948 alignment that has subsequently been replaced by the current alignment represented by Feature 22. Another alternative is that Feature 15 represents an old trail that predated the 1948 road but is not shown on the Historic period maps.

Two other road features are mentioned here, although they are not linked to Silver King Road. Feature 10 is an unimproved road that follows a ridge line and joins with Silver King Road in the project area. The alignment of Feature 10 roughly corresponds to the location of the trail from Superior to Silver King Road shown on the 1901 USGS Florence 30' quadrangle map. No artifacts were found along Feature 10 to confirm that the present road does in fact date to this period. The present alignment of Silver King Road west and north of the present project area also follows a portion of the approximate route of the cutoff trail shown on the 1901 Florence map. A short spur of Feature 10 truncates Feature 15.

The other road is Feature 18. This is a short spur that connects the original Silver King Road, AR-03-12-02-567(TNF), with the current Silver King Road that is described here. This connection does not appear on any of the Historic period maps reviewed and, again, there is nothing associated with Feature 18 to indicate that it is archaeological.

MATERIAL CULTURE: No artifacts are directly associated with the road, but there is a “halo” of artifacts about 50 to 100 feet wide parallel to the road. These were identified as isolated finds even though some may be trash discarded along the road. Artifacts observed include a house-shaped Log Cabin syrup can (*see Table 3*, Artifact 7); a hammered-aluminum pitcher (*see Table 3*, Artifact 20) (*Photo 7*); a white-enameled steel mixing bowl (*see Table 3*, Artifact 19); bottle breaks; and rusted steel cans of indeterminate age. This halo of artifacts is not included within the boundary of the site.



Photo 7. Isolated artifact 20

SITE CONDITION: The active road is maintained and is in good condition. Feature 15 is gullied and eroded, but the route is still recognizable.

INTERPRETATION: AZ U:15:217(ASM) is a Late Historic period road that travels from U.S. 60 to the former mining boomtown of Silver King northeast of the project area. The original Silver King Road followed Silver King Wash and connected the mine site and related boomtown to the mill site that was located on Queen Creek at the old townsite of Pinal. By 1900, the silver was played out at the Silver King Mine and the boomtown of Silver King largely abandoned. The town of Superior then grew into the prominent settlement in the area. The present road may represent an alternative and shorter access route to Silver King Road from the town of Superior.

SYNTHESIS OF FINDINGS

The inventory of the project area resulted in the identification of 38 isolated artifacts and features and two archaeological sites. Most of the isolated features and one of the archaeological sites are related to mining in the area. The northern end of the project area lies within the boundary of the Gerald Cansler claim (Patent 857949) that was surveyed on April 14, 1918, and filed at the U.S. Surveyor General Office in Phoenix on May 28, 1919 (Goetz 1919). AZ U:12:218(ASM) is a miner's cabin and related features and artifacts located near the center of the Gerald Cansler claim. The other mining features include rock cairns, buried 1-inch iron pipelines, open excavations, a trail, and a bulldozer road. These are located within the Roland claim that is shown on the Gerald Cansler plat as unsurveyed.

The other archaeological site identified is the present Silver King Road. The current alignment was established by 1948 as indicated on the 1948 USGS Superior 7.5' quadrangle map. The survey identified what appears to be two parallel alignments of the road. The one higher up the hill may be the alignment shown on the 1948 map or an older trail that is not shown on earlier Historic period maps.

EVALUATIONS AND RECOMMENDATIONS

The preceding portions of this report have presented background information and an inventory of the archaeological resources. The cultural resources inventory is based on a review of existing archaeological survey data bolstered by supplemental reviews of archaeological site records and archaeological literature, and a pedestrian field reconnaissance of the project area. This section of the report presents the NRHP-eligibility recommendations, an assessment of the potential adverse effects, and recommendations to avoid, minimize, or resolve the potential adverse effects ([Table 4](#)).

Table 4. Archaeological management summary

Site Number (ASM)	Location	Land Status	Age, Cultural Affiliation, and Function	Significance	NRHP Recommendation	Recommended Treatment
AZ U:12:217	T1S R12E Sect 26	Private	Historic, Euroamerican road	Not significant	Not eligible	None
AZ U:12:218	T1S R12E Sect 26	Private	Historic, Euroamerican mining cabin	Significant	Eligible	Avoidance

The significance of cultural resources is evaluated according to the implementing regulations of Section 106 of the National Historic Preservation Act. Federal regulation 36 CFR 60.4 defines the criteria for determining whether or not cultural resources have significance in American history.

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory and history.

A historic context is the analytic framework within which a cultural property's importance can be understood. The dimensions of time, place, and research theme converge to create the historic contexts relevant for evaluating the significance of cultural properties in a specific area. The National Park Service (NPS) (Hardesty and Little 2000:18; National Park Service 1996) has provided a thematic framework for history and prehistory to reflect current scholarship and to represent the full diversity of America's past. The themes and topics of the current NPS thematic framework are:

I. Peopling Places: The statistical study of human population, family, and the life cycle; dynamics such as growth and decline; aggregation and dispersion; migration from outside and within; community; encounters, conflict, and colonization; abandonment; ethnicity, ethnic homelands and cultural identity; and quality of life including health, nutrition, and disease.

II. Creating Social Institutions and Movements: Study of the manners by which people develop groups or organizations within a society and how these are organized including identification of the groups, physical manifestations of the social structures within an individual site and across the landscape, recreational activities, social ranking at the level of the individual and groups, alliance and interaction, effect of cosmology (religion) on the organizational structures, mortuary practice, and symbolic communication.

III. Expressing Cultural Values: Study of educational intellectual currents; visual and performing arts; literature, mass media, architecture, landscape architecture, and urban design; and popular and traditional cultures.

IV. Shaping the Political Landscape: Study of the development and impact of social institutions such as governmental institutions; political ideas, cultures, and theories; military institutions and activities as well as parties, protests, and movements.

V. Developing the American Economy: Study of how society transfers services and materials between individuals and communities, how resources and goods are extracted, produced, distributed, and consumed among the society; transportation and communication including trends related to travel and the transference of information within a society and between societies such as the information that is being conveyed, the mechanisms for transferring the information, and the nature of the communication; workers and work culture; labor organizations and protests; exchange and trade; governmental policies and practices; and economic theory.

VI. Expanding Science and Technology: Study of experimentation and invention; technological applications; scientific thought and theory, and its effects on lifestyle and health.

VII. Transforming the Environment: Generally defined as the study of human techniques and processes of manipulating the natural environment and its resources such as water and soil control, resource management, modifications of the natural landscape, resource identification and procurement, food preservation and storage, architectural design and construction, and production of tools and implements. Also includes adverse consequences and stresses on the environment and protecting and preserving the environment.

VIII. Changing Role of the United States in the World Community: Study of international relations; commerce; expansionism and imperialism; and immigration and emigration policies.

The specific historic contexts necessary for evaluating the quality of significance of the cultural properties discovered in the project area are created by considering the thematic framework presented above with regard to the prehistory and history of the project area as presented in the *Archaeological Background* section of this report. This convergence of local archaeological history and the NPS thematic framework creates the necessary historic contexts for evaluating the significance of individual sites.

The isolated artifacts and features identified during the survey are considered, as a lot, insignificant because they generally lack the quality of association. Only the significance of the two archaeological sites is considered. The two archaeological sites identified during this survey are related to two Historic period themes: transportation and mining. Both of these themes can be linked to the NPS themes *Developing the American Economy* and *Transforming the Environment*.

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY EVALUATIONS

AZ U:12:217(ASM) – Silver King Road (1948)

WestLand recommends that Silver King Road, AZ U:12:217(ASM), is not eligible for inclusion in the NRHP.

Roads in the Superior area were developed in the late 1800s for two purposes. In the 1870s, Stoneman's Grade was constructed to provide access to the military post at Pinal east of the Apache Leap to help quell Apache raids on Euroamerican mines, ranches, and settlements in the area. Stoneman's Grade later became the principal route for transportation of merchandise, people, supplies, and ore between the mining townsite of Silver King and the mill site of Pinal located at the foot of Picket Post Mountain on Queen Creek. Stoneman's Grade also provided a transportation route to the mining towns of Miami and Globe to the east and places in between. During the heyday of the Silver King Mine, people and goods were transported by wagon or stagecoach to Silver King and then packed on mules east to Miami and Globe. The silver at the Silver King Mine played out in the late 1880s and soon the mine and town were abandoned. Superior then became the primary settlement in the area. With the change in demographics in the Superior area, the character of the transportation of merchandise, people, supplies, and ore in the area shifted. By 1882, an alternative route, the Apache Leap Trail, was constructed that connected Florence to the towns of Miami and Superior. In 1922, the Apache Leap Trail was replaced with the Superior-Miami Highway, now generally the route of U.S. 60.

The present Silver King Road appeared on the landscape after the Silver King townsite was abandoned. The road begins at U.S. 60 on the western outskirts of Superior and ends at the old site of the Silver King Mine and ghost town. It is unlikely that this road served the same importance as the main corridor of transportation and commerce held by the original Silver King wagon road. This road now seems primarily to provide recreational and ranching access to TNF lands west and north of the project area. As such, the road is unremarkable and does not have significance in either national or local history.

AZ U:12:218(ASM)

WestLand recommends that AZ U:12:218(ASM) is eligible for inclusion in the NRHP under Criteria (a) and (d) based on its association with the early mining boom in the Superior Mining District and its potential to yield important scientific information about Historic period mining in the region.

The history of the Superior area is closely linked with the history of mining in Arizona, specifically, and in the western U.S., generally. The mineral discoveries in Arizona created a lure that drew people from many other parts of the U.S., Mexico, and other countries. These people came looking to find fortunes in opportunity. The early days of mining are defined by the sweat and efforts of individuals who staked claims in promising areas. As the mineral resources of some of these claims proved out, the claims were developed into or obtained by mining companies. AZ U:12:218(ASM) appears to be the remains of a prospector's camp with a stone cabin and a waterline. The mineral survey for the claim was completed in 1918 and filed with the Surveyor General Office in 1919. At that time, the claim patent was filed with the Magma Chief Copper Company as the owner. It seems likely that the claim was staked before this and worked and developed. As such, AZ U:12:218(ASM) represents an example of the early days of prospecting and mining in the Superior area and has the potential to yield important information about the life and efforts of individual miners.

EVALUATION OF EFFECT

The proposed construction of the 115 kV electrical transmission line has the potential to affect one historic property, AZ U:12:218(ASM). Silver King Road (1948), AZ U:12:217(ASM), will not be affected because this archaeological site lacks significance in American or local history.

RECOMMENDED TREATMENT

WestLand recommends that SRP and Resolution take steps in the design, construction, and maintenance of the transmission line to avoid affecting AZ U:12:218(ASM). If avoidance is not a viable treatment, then WestLand recommends the preparation of a data recovery plan that defines treatments to minimize or resolve the adverse effect. WestLand recommends that the treatments include additional archival research, more detailed and thorough mapping and photographic documentation of the site and features, and field studies to further define the materials present and the extent of the site.

MANAGEMENT SUMMARY

WestLand recommends that SRP and Resolution take steps in the design, construction, and maintenance of the 115 kV line to avoid affecting AZ U:12:218(ASM). If avoidance is not a viable treatment, then WestLand recommends the development of an archaeological program to resolve the adverse effect. In all future work, pursuant to Arizona Revised Statute §41-865, if human remains are encountered anywhere in the project area during ground-disturbing activities, all activity shall cease in the area of the discovery and the Director of the ASM shall be immediately notified. All ground-disturbing activities in the immediate vicinity of the discovery shall cease until a qualified archaeologist assesses the significance of the remains. Work in and around the area shall not resume until so directed by ASM personnel.

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