

THE HISTORICAL EVALUATION AND SIGNIFICANCE OF THE OLD JOERGER
RANCH, MARTIS VALLEY, CALIFORNIA.

By

Hope Caroline Schear

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Committee Membership

Dr. Justine Shaw, Committee Chair

Dr. Marissa Ramsier, Committee Member

Dr. Marisol Cortes-Rincon, Committee Member

Rebecca Robertson, Program Graduate Coordinator

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ABSTRACT

THE HISTORICAL EVALUATION AND SIGNIFICANCE OF THE OLD JOERGER RANCH, MARTIS VALLEY, CALIFORNIA.

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United States history is full of adventure and pioneering but building the regional histories of the nation allows one to dig deeper into what it took to make this country develop socially and economically. In the mid 1800's California experienced a boom like never before. In 1848, mill workers found gold at Sutter's Mill in Coloma, California, which led to a huge influx of people and population spike that changed California forever. Once the Gold Rush subsided, agriculture replaced gold in California as a wealth generator. Early settlers discovered that the mild climate of the region allows a wide variety of crops, orchards, and livestock to thrive. Today, California grows a majority of the nation's fresh fruits, vegetables, and nuts. Despite the agricultural industry's importance after the Gold Rush to the state's growth and development little work has been done to understand the daily lives of early settlers whose choices, hard work, and ingenuity led to California's success. Archaeological remains of these early agricultural settlements are few and far between. Unfortunately, development and expansion throughout California has destroyed many sites. Through the lens of historical archaeological investigation and archival research, one of these rare properties, the old Joerger Ranch, in the Martis Valley of Northern California, has been evaluated for the

National Register of Historic Places for its archaeological data's potential and historical significance. This investigation adds to the knowledge and understanding of what can be learned from archaeological investigations at these types of properties and helps reveal more about the lives of the people who helped shape the state into what it is today.

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INTRODUCTION

The Old Joerger Ranch (CA-PLA-483/H) is a historic period archaeological site located on U.S. Army Corps of Engineers (Corps), Sacramento District property, and falls within the floodplain of the Martis Creek, in the Martis Valley of Northern California, southeast of the City of Truckee, in Placer County. It was one of the first homesteads in that valley and played an important supporting role to industries such as logging that were developing in the region in the late 1800s. What remains of this seasonal grazing ranch and dairy covers approximately 2.8-acres and includes three rectangular depressions thought to be a house foundation with artifacts spread across the surface. It was surveyed in 2011 as part of a larger effort to identify archaeological deposits on Corps property at the Martis Creek Lake and Dam, but has not been formally evaluated for the National Register of Historic Places (NRHP) (Griffin 2011, Perry 2017).

The social, cultural and economic history of California's agricultural industry is critical to understanding the state's development. Accessing the archaeological record affords us the opportunity to better understand the daily lives of the families and workers who lived through and fostered this development. How they lived and worked factored into their success and their success led to California's success. Because they did not often take the time to keep journals, diaries and other such records, the historical record alone does not provide their complete story (CalTrans 2007, p.6).

The goal of this research is to determine if the Old Joerger Ranch is significant in local, regional, or national history, and assess if it contains enough archaeological data potential and integrity to be considered eligible for inclusion on the National Register of Historic Places (NRHP). Federal agencies have the responsibility and mission to inventory and evaluate any historic resources located on government land. Section 106 of the National Historic Preservation Act (NHPA) and the 36 CFR 800 provides the implementing regulations that guide the process Federal agencies follow to accomplish that mission. This project seeks to provide the necessary evaluation and recommendations for the Corps to meet this responsibility.

In order to achieve that objective, site specific historical and archaeological contexts were developed to evaluate the site's importance, integrity, and period of significance. The research questions and data requirements developed for this project were adapted from the research design developed for California agricultural properties by the California Department of Transportation (CalTrans) in cooperation with the Federal Highway Administration and the California State Historic Preservation Office (SHPO) (CalTrans 2007).

CHAPTER 1: PHYSICAL CONTEXT

The following description details the physical environment of the Martis Valley and is adapted from two sources. The first is the Martis Valley Workbook which is a contextual overview of human land use and environmental conditions in the Martis Valley. The second is an archaeological survey report detailing an extensive pedestrian survey of 1,896 acres, conducted at the Martis Creek Lake and Dam in Placer and Nevada counties, California, between 2009 and 2013. Both reports contain comprehensive descriptions of the physical environment in the Martis Valley (Lindström 2011 and Perry et al. 2017). Figure 1, facing south, shows the valley as it looks today.



1. Modern Martis Valley, California (U.S. Army Corps Digital Library Image).

Vegetation in the valley has been altered by historic irrigation, grazing, logging, possibly indigenous burning practices, and the introduction of invasive plant species. An interview conducted by Norman Wilson in 1957 of Joe Joerger Jr., the son of early Martis Valley rancher Joseph Joerger, revealed that sagebrush had moved into the valley during his lifetime (Lindström 2011). Previously, the valley was carpeted in grasslands all the way up to the surrounding terrain's tree line. This change has been attributed to heavy livestock grazing during the second half of the nineteenth century (Lindström 2011).

Geology and Hydrology

The Martis Valley, situated in the Truckee Basin, is west of the Carson Range, a spur of the Sierra Nevada Mountain Range and east of its main crest. Although it is located in the Sierra Nevadas, it is hydrographically related to the Great Basin since the Truckee River that runs through it does not drain towards the ocean but instead flows in a northeasterly direction until it empties into Pyramid Lake 40 miles northwest of Reno, Nevada. Martis Creek feeds into the Truckee River after flowing north along the eastern edge of the valley. Its watershed is delineated by glacial deposits on the west and a mountainous ridge to the east. This area is geologically active and the newly discovered Polaris Fault runs within 200 meters of the dam. Another unnamed, north trending fault is near the right abutment of the Martis Creek Dam. Fine-grained volcanic Igneous rocks (FGV) - basalt, andesite, dacite, scoria and tuff are found throughout the valley. The valley floor is relatively flat and overlaid with alluvial, glacial and glaciofluvial deposits. Obsidian and a pinkish white silicate known as sinter is also in proximity to the valley.

Climate

The Martis valley's floor elevation is around 5,800 feet and the surrounding peaks rise to 8,000 feet. The summers are warm and dry with an average high temperature of 80 degrees Fahrenheit and night time lows around 40 degrees. The winter is cold and wet with temperatures that range from below 40 degrees during the day and drop to below 0 degrees at night. Deep snow accumulation between October and April is typical in the valley and the surrounding uplands.

Flora

Six floral communities were observed within the valley and inventoried by Biologist Maria Garr Brumbaugh during 2009-2010 (Perry et al, 2017). These include: wet montane meadow, montane riparian scrub, silver sagebrush scrub, sagebrush scrub upland, ponderosa pine forest, and barren/ruderal.

The wet montane meadows located closest to the creek have saturated soil and surface water. This environment is dominated by: Lemmon's willow, wildfruit sedge, beaked sedge, annual hairgrass, meadow barley, spiked bentgrass (in the wetter areas), Canada goldenrod, Kentucky bluegrass, near navarretia, and Mexican rush (in the transitional areas). The areas containing montane riparian scrub are saturated, generally sandy soils with a highwater table where surface water is common. This area is dominated by: Lemmon's willow, beaked sedge, wildfruit sedge, and Mexican rush. Transitioning from the wetter vegetation communities to drier upland communities but

still within saturated soils, there is a variety of sagebrush and scrub including: silver sagebrush, widefruit sedge, Lemmon's willow, tall annual willowherb, and blue wildrye. Sagebrush scrub also exists upland within a transitional belt between wetter vegetation communities and dryer upland vegetation communities. These regions contain drier soils and support: big sagebrush, antelope bitterbrush, Mexican rush, squirreltail, and tall annual willowherb. At higher elevations the environment becomes drier and dominated by rocky terrain. The flora consists mostly of ponderosa pine with a sparse understory of sagebrush scrub upland species. The barren/ruderal community is located within highly disturbed ground and the soils are very dry. This area is characterized by barren ground or sparse ruderal vegetation including: tall annual willowherb, cheatgrass, and woolly muellin.

Fauna

A variety of insects, fish, reptiles, amphibians, waterfowl, shorebirds, songbirds, raptors, and various sizes of mammals, call the Martis Valley home and utilize its rich environment. This information is adapted from Corps Biologist, Mrs. Mariah Garr Brumbaugh's discussion on wildlife found in the various habitats at Martis Valley (Perry et al. 2017).

The wet montane meadows are typically too wet for small mammals but they can be found in the late summer when the meadows are drier. Various frogs and the Mountain garter snake are found in the wet environment surrounding the creek and six species of trout (brown, cutthroat, golden, rainbow, eastern brook, and mackinaw) inhabit

the streams. Year round, the area is populated by mule deer, elk, waterfowl, coyote, bear, sparrows, and raptors; or birds of prey, living on the natural resources found within this habitat.

The sagebrush scrub upland environment is important for many species and serves as a habitat for migrating game animals. Mule deer summer at middle and higher elevations and migrate to the lower regions in the winter months. Other species include: jackrabbits, cottontail rabbits, ground squirrels, least chipmunk, kangaroo rats, wood rats, pocket mice, deer mice, grasshopper mice, sagebrush vole, and California bighorn sheep. Birds include; chukar, gray flycatcher, pinyon jay, sage thrasher, and several sparrows and hawks.

The ponderosa pine forest supports a wide variety of species and is home to larger mammals including coyote, mule deer, elk, mountain sheep, black bear, bobcat and mountain lion. Birds include Stellar's jay, woodpeckers, Clark's nutcracker, Cassin's finch, red crossbills, and evening grosbeaks. Smaller mammals include mice, chipmunks, and tree squirrels.

CHAPTER 2: HISTORIC CONTEXT

The Gold Rush

Popular history relates that on January 24, 1848, James Marshall, a construction foreman found a pea-sized gold nugget at Sutter's Mill, a lumber mill located on the American River in Coloma, California. After confirming that he had in fact found gold with the camp cook and laundress, a Ms. Elizabeth Jane "Jennie" Wimmer, who grew up in a prospecting family, he notified his boss Mr. Johann Augustus Sutter (John Sutter) (Weiser, 2017). Mr. Sutter owned 50,000 acres of property around the Sacramento, American, and Feather Rivers, and hoped to develop that land into a farming community called New Helvetia, or New Switzerland. His main residence was Sutter's Fort, a destination for immigrants traveling west to settle. It wasn't long before news of gold finds all over the area got out and John Sutter's dream of a peaceful farming community abruptly came to a halt. On August 19, 1848, the New York Herald confirmed a gold rush in California and on December 5, 1848, President James Polk made the announcement to Congress, thus legitimizing the news (Weiser, 2017). Thousands of immigrants from around the world soon descended upon what is now known as Gold Country, California, with hopes of striking it rich. These contemporary argonauts became known as the '49ers. The peak of the Gold Rush was in 1849 and lasted through 1858.

Historians view the Gold Rush as a pivotal moment in California's history. This event was the first catalyst that significantly spiked immigration from all over the world,

created the need for commerce and infrastructure, made and lost fortunes, created one of the largest and most diverse agricultural regions in the world, and contributed to the marginalization of the diverse Native American population. As the glow of the Gold Rush faded, the new pioneers and disappointed prospectors began to settle down and carve out new lives for themselves. Land was abundant and available. New communities blossomed, and the need for goods and services grew. Many saw an opportunity and capitalized on it by developing businesses to help alleviate that need (Jelinek 1998). As transportation improved, settlement expanded further into remote and less hospitable areas of California (Lindström 2011). The Martis Valley is one of these spaces and it holds the remnants of a quiet, yet important, industry that helped shape the region. Unfortunately, the dairy industry's importance has been overshadowed by the histories of the railroads, mining, and lumbering industries. The dairy industry, and "Truckee Butter" in particular, added to the region's fame and it thrived in the Truckee River Basin from 1860 until the Great Depression of the 1930s (McGlashan 1982).

California's New Gold

Ranchos, which are large land grants of around 48,000 acres, owned and operated by *rancheros* (the holders of title to these properties), were the primary agricultural operations in California before the Gold Rush (Jelinek 1999, Clay & Werner 2006). During the Gold Rush the sudden population growth was too much for the existing market to handle. There was simply more demand than supply. This increase in demand outstripped the ability of *rancheros* to provide enough good beef to the newly emerging

mines and fast-growing towns (Jelinek 1999). This opened up the market to competition from Texas, Mexico, and the Midwest. Cattlemen from these regions brought in hardier breeds of cattle and sheep (Jelinek 1999). The transport of perishable foods was nearly impossible because the technology and infrastructure needed to transport fresh products requiring refrigeration was not in place. Many of the food products that entered California during the 1850s had to be cured from salting or other time-tested but inefficient means (CalTrans 2007).

Agriculture in the state boomed during the late 1850s as gold fever wore off and enterprising immigrants who came to mine viewed the state's rich soils, mild climate, and relaxed enforcement of land rights as an opportunity to grow crops and raise livestock for profit (CalTrans 2007, Clay & Werner 2006, Jelinek 1999). Agriculture became the second most important and profitable industry in the state, second only to mining. Experimentation with this new land is what drove innovation and the development of one of, if not the most, diverse agricultural landscapes in the world today (CalTrans 2007).

Dairy Industry

Before statehood, the first cattle in the area were from a Mexican stock better suited for meat, hide, and tallow rather than milk. However, this did not prevent Franciscan Missions from San Diego to Sonoma from producing and consuming milk, cheese, and butter which proved to be an important staple for their diet in the late 1700s (Bishop et al. 2005, CalTrans 2007, Santos 1994,). As mission and rancho herds grew, a new industry developed exporting tallow and hides to eastern markets by ship which

helped grow the shipping industry out of San Diego, Santa Barbara, and Monterey (Bishop et al. 2005). Between 1812 and 1841 farming and dairying on the Sonoma coast grew as Russian settlers at Fort Ross shipped butter, cheese, and local produce to fur-trapping settlements in Alaska (Bishop et al. 2005). When the Russians left in 1841, John Sutter acquired the materials left at the fort including a small dairy herd and he operated dairies at Mills Station (modern day Rancho Cordova) and Yuba City. Although dairying was practiced throughout the area, it was still primarily a domestic operation rather than an economic endeavor. This changed drastically when gold was found at Sutter's Mill.

The Gold Rush brought immigrants with a desire for milk, cheese, and butter (CalTrans 2007). Some of these travelers brought along their family cow and surplus milk sold for a pretty penny.

“October 1, 1851, I bought two American cows fresh with young for \$400.

These cows have averaged 12 quarts each per day, which I have sold at 50 cents per quart, totaling \$720 for two months. These cows I have fed on hay at \$80 per ton, meal at \$8 cwt and potatoes at \$4 per cwt, at a cost not over \$100 for the two months. I would not sell my two cows for \$1000” -Philip Lynch of Ophir, Placer County (CalTrans 2007, p.87).

California's mild and arid climate helped make it an excellent region for dairy production. This weather enabled dairy herds to roam and graze for most of the year (Santos 1994). Four regions of California soon became centers for dairy production; the Northern California Coast, the Central Coast, the Central Valley, and the Sierra Nevada (Figure 2). Each environment proved unique, with some better suited to dairy ranching

than others. Shorthorn cattle driven from Texas to feed hungry miners proved to be a game changer. These cows were primarily for meat but they were also better producers of milk than the cows from Mexico (Santos 1994, CalTrans 2007). Devons and Durhams were introduced in the early 1850s, Alderneys and Ayrshires in the 1860s, and by the mid-1870s the Jersey became the dominant breed because of its ability to produce large amounts of butter fat, the key ingredient in cheese and butter production (CalTrans 2007). In the 1880s Holstein-Friesians, black and white coated cattle thought of today as the standard dairy cow, replaced the Jersey as the dominant breed in the state due to their larger, stronger frame and ability to produce more milk than the Jersey (CalTrans 2007). Production numbers of the era highlight the dramatic change: In 1850, California produced 705 pounds of butter and 150 pounds of cheese. By the 1880s, butter production rose to 16 million pounds and cheese to 3.7 million pounds (Santos 1994). During the 1880s and 1890s, high demand, new and sturdier breeds of cattle, scientific innovation, improvements in irrigation, more effective transport methods, and stockpiling winter feed allowed dairymen to thrive and become an important part of California's now thriving agricultural economy (CalTrans 2007, Santos 1994).



2. Map of California Regions (CAREGI 2018)

Brief History of the Martis Valley

The Washoe (Wel mel ti)

The Martis Valley is home to the Native American Washoe people or Wel mel ti. According to their own history, they have always been a small tribe descended from an ancient people who have occupied the region since time immemorial (Rucks 2011).

Archaeological evidence in the Martis Valley attributed to the Washoe dates to as early as the fifth century CE (Rucks 2011). The Washoe territory covers approximately 4,000 square miles and extends from east of Sparks, Nevada, into California, west of Lake Tahoe (Perry 2017). Other Native American groups shared this region and the Washoe often travelled outside of their own territory on seasonal hunting and gathering trips. They are known to have gone as far west as the American River in Sacramento, California, and as far east as Pyramid Lake in Nevada (Perry 2017). They embody both California and Great Basin culture groups. Linguistically, they are a Hokan-speaking population similar to the Chumash and Diegueño of Southern California but culturally they are similar to the Numic speakers of the Great Basin (Lindström 2011, Perry 2017).

A Washoe household generally consisted of a married couple, their children, the couple's parents, siblings, and their siblings' children, and even non-related friends who lived in a winter house (Rucks 2011). Their community groups consisted of generally four to ten families within close proximity. They traveled with these groups throughout the year and together participated in hunting, war, and special ceremonies (Rucks 2011). Washoe traditional life revolved around seasonally harvested resources and included activities such as; fishing, hunting, trading, and gathering of acorns, pine nuts, wild onion, medicinal roots, seeds, and marsh plants (Lindström 2011). There was a tendency for groups to move from lower to higher elevations during the milder seasons and to return to lower elevations for the rest of the year. The Washoe distinguished “detdéyi” or “people living there” from smaller camps. Twenty-three have been identified, three specifically in the Martis Valley (Rucks 2011). They often wintered in these year-round

settlements and it was not uncommon for people to stay in higher elevations even in the deeper snow (Lindström 2011, Rucks 2011).

According to Washoe traditional history the Spanish were the first Europeans they encountered. The stories of girls captured and forced to work in Spanish mines generated the lore among the Washoe that if any of them got involved in mining it would kill them (Rucks 2011). This belief is still used by the Washoe to explain why their ancestors avoided mines and may explain why they left the Donner and Martis Valleys in the mid-nineteenth century after the mining industry took off (Rucks 2011).

Background research conducted by Penny Rucks (Rucks 2011) reveals that documented encounters between the Washoe and Americans began in 1844 with positive accounts of encounters with John C. Fremont and Kit Carson. Relations soured however when fur trappers camped at Honey Lake from July to October. In October of 1844, the Stephens-Townsend-Murphy Party also passed through Washoe territory with a wagon train of 55 wagons that Washoe lookouts described as a snake which frightened them (Rucks 2011, Lindström 2011). Mountain man James Clyman was the first to mention the Washoe by name. He identified them as Washee, Washew, Waushu (Rucks 2011). The editor of Clyman's journal indicated that this encounter most likely took place in the Martis Valley near Prosser Creek. There are two stories in the extensive literature on the famous Donner party's experience while stranded that describe encounters with Native Americans who were friendly and offered help. These people are believed to be Washoe who were trapping nearby (Rucks 2011). Washoe family histories described witnessing the cannibalism that took place and being fired upon when approaching the trapped

settlers with offers of food (Rucks 2011). One of the Washoe men died from his wounds and the rest quickly left the area around Donner Lake. Most eventually moved closer to present day Truckee (Rucks 2011).

The Gold Rush changed traditional life for Native Americans all over California and the Washoe did not escape this fate. As choice locations and resources within their homelands displaced them the adoption of foreign technology and practices became increasingly necessary for their survival (Lindström 2007, Rucks 2011). They began to trade goods and services (selling baskets, catching fish and game, working as domestic laborers, wood cutters, ice harvesters, care takers, game guides, etc.) with the dominant Euro-American population in exchange for camping rights and access to what resources remained (Lindström 2011, Rucks 2011, Shaw et al. 2012). Interviews conducted by Dr. Lindström with Joseph Joerger's descendants, Art Tong (in-law relation) and Bertha Joerger Wolverton (granddaughter), relate stories of local Native Americans trading fish for milk and harvesting wild onion and garlic in the valley. This actually pleased the dairymen since it prevented dairy cattle from eating it and spoiling the taste of the milk (Lindström 2011).

Euro-American Settlement

After the first wagon trains snaked through the valley in the 1840s and 1850s and successfully made the first trans-sierra crossings, the Martis Valley went from a quiet picturesque wilderness to a major frontier destination by the mid 1860's (Lindström 2011). Development within the valley began with the arrival of Joseph Grey in what is now the town of Truckee, California (Lindström 2011). In 1858, Grey and two other men

built a two-story cabin on 640 acres with two other men. Shortly thereafter Grey moved his family out to be with him (Coates, n.d.). Soon after moving his family in, his land was confiscated by railroad surveyors. Grey fought back through legal channels and on August 16, 1864, re-acquired the property (Coates, n.d.). His cabin was located along the only road where two major transportation routes converged: the Henness Pass route from the upper north fork of the Yuba River and the Dutch Flat-Donner Lake Turnpike. Grey's home soon became a major hub for travelers heading west to California's gold fields or east to the recently discovered Comstock Lode in Nevada (Lindström 2011). His establishment served as a friendly roadside inn where travelers could rest, get supplies, and obtain directions or information (Coates, n.d.).

The Martis Valley also experienced a brief mining boom from May to September of 1863. The diggings, initially centered on the Middle Martis Creek, were named the Red White and Blue Mining District, to show support for the North during the Civil War (Lindström 2011). A survey party discovered a number of quartz ledges and the mining boom that followed brought more than 700 miners into the valley. Several mining towns popped up within the valley to support their needs but were soon abandoned once the mines played out (Lindström 2011).

A number of other industries developed in the valley around the time of the mining boom. With the completion of the transcontinental railroad in 1869, Truckee-Donner Ice Harvesting, which lasted from 1868 to the 1920s, cornered the local ice market and joined the lumber industry in the area as a major economic power (Lindström 2011).

During the 1860s, the Comstock Lode created a need for vast quantities of lumber and the railroad needed wood for rail ties (Ataman, 1999). Once the railroad reached Truckee in 1866, lumbering in the valley became a major industry that lasted until the early twentieth century. In addition to lumber harvesting, a number of saw mills were established. Charcoal, brick, and shingle factories went up and the number of lumber companies, large and small, in the valley grew. There was even a chair and furniture factory (Ataman 1999, Lindström 2011).

The Martis Valley and its lush grassy environment was found to be a prime location to graze sheep and cattle during the late spring, summer, and early fall. Gladys Joerger Grey recalled that sheep were grazed by Basque men at higher elevations where cattle could not travel (Lindström 2011). The valley itself became a center for dairying operations and flourished from at least 1876 to the 1930s. The Joerger family was the first in the valley to graze dairy and beef cattle. They were followed by other family businesses including the Waddles and the Cavitts. The Joerger family owned the largest and best property in the valley and their main product was butter which they produced in large quantities for the lumber industry (Lindström 2011, 2016). Although unconfirmed, “local legend maintains that the Joerger family sold thousands of pounds of butter to the Richardson Brothers to grease the log skids of their pine pole railroad” (Lindström 2011).

The Cavitts following the Joerger’s lead, began ranching in the valley in 1905 and they both maintained operations until the 1960s. The original, or “Old” Joerger Ranch was no longer used after a new ranch house was built in 1941 on the southwest side of the valley. Operations ended in the 60s because both the Cavitts and Joergers were forced to

sell their properties to Douglas County (now Placer) under the right of eminent domain because of the construction of the Martis Creek Dam by the Corps in 1970. Shortly after that the Old Joerger Ranch buildings were torn down (Lindström 2011, 2016).

Patriarch Joseph Joerger's Story

The following story has been pieced together from various accounts of Mr. Joerger's life told by his descendants, newspaper articles, and other sources cited (El Dorado Historical Museum, Person File/Joeerger). Figure 3 is an image of several influential cattlemen. They are being photographed for a news story in Placerville, California. Mr. Joerger is pictured 4th from the left with a cowboy hat and cane.



3. Cattlemen in Placerville (El Dorado Historical Museum Collection).

Mr. Joseph Joerger was born on March 1, 1831 in a country home two miles from the city of Strasbourg in the region known as Alsace-Lorraine, in France. His father was

a boatman on the Rhine River and they lived on a farm that produced milk, cheese, and butter. Joseph told his family stories of delivering dairy products to homes around Strasbourg at a young age. When Joseph was born, the region was at peace under King Louis Philippe, but when he was eighteen there was an uprising and, fearing a prolonged war, his father slipped Joseph and his younger brother Michael out of the country and sent them to the United States. They arrived in New York in 1848 and found work for \$10 per month riding the horses that dragged barges up and down the Erie Canal. A short time after their arrival Michael drowned in Lake Erie. After his death, Joseph made the decision to go to California. His boss offered Joseph \$12 a month to stay but he declined and boarded a clipper ship to California. The trip lasted several weeks, and took him around Cape Horn to San Francisco where he arrived in March of 1851. Joseph told his family that he was 21 when he arrived in California. Once in San Francisco he took a river boat to Sacramento and made his way to the Folsom area known at that time as Negro Bar, named for the first miners in that area. He recounted to family that there was a mining settlement named Ashland across the river from Negro Bar and this is where he panned for gold. In 1853 the Natoma Water and Mining Company completed their ditch that transported water to the dry diggings in a spot named Prairie City. He worked there for four years. A single miner would average \$15 per day. Mr. Joerger's family fondly remembers him as a generous man who sent the first \$200 dollars that he made in mining back to his family in France. The family also recounts that life was very lonely for him and filled with the hardest kind of work. Apparently, the English-speaking miners he

encountered were unfriendly and suspicious of anyone with a foreign accent (El Dorado County Historical Museum Collection).

In 1856, Joseph accumulated enough wealth to purchase sheep and go into business with two men named Windmiller and Stewart. It wasn't long after this he purchased land near Folsom Lake in what is now called El Dorado Hills. He also purchased 700 head of cattle, 200 of which were dairy cows, and drove them up to higher alpine meadows in the summer. Joseph learned this practice in France and was the first in this region to do so. He was known as "Grasshopper Joe" in the Clarksville area and the property he acquired was called the Grasshopper Place. Grasshoppers are very destructive to the grass needed to feed cattle. One story describes Native Americans working with local cattlemen to beat the grass and catch grasshoppers for food. This practice allowed the Native American groups in the area to continue their traditional food gathering practices and helped the cattlemen retain healthy grass (Lindström 2016). Another story demonstrating the lengths of this problem took place in June of 1902. According to the "Pacific Rural Press," a group of stockmen, consisting of the most influential sheep and cattlemen in the area, including Mr. Joerger, opposed a proposition to burn all grazing lands in Sacramento and El Dorado counties. The counties were attempting to save the orchards and vineyards from the grasshopper infestation. There were no assurances that burning these grasslands would actually work. The county governments also discounted the stockmans' need for dry grass to feed their animals while traveling back from the alpine meadows until new grass grew in the spring. The stockmen were adamant and the article ends with an ominous statement: "When the

miners destroyed the lands of the farmers, or threatened to destroy them, there was ample protection found in the courts. When interests conflict, it is not safe to destroy one great industry, that another may thrive, unless the laws be very specific on the subject” (PRP, 1902: 427).

One account of the family’s cattle drive to high country has Joerger initially going up highway 50 and then driving the cattle up Silver Creek to meadows near what is today known as Wright’s Lake. For about eight years, the cows were milked at that location and the milk was placed in 1-1/2-gallon pans. The cream was then skimmed off and butter was made at the camp. The products were then shipped to Sacramento and San Francisco by freight wagon at night to avoid the heat of the day. This area might have been used until around 1875 (El Dorado County Historical Museum Collection).

During this time period, Joerger became acquainted with the family of his future wife. The Hess family was also from Strasbourg and on December 4, 1866, Joerger married Catherine Hess. They had a daughter, Frances Catherine, born June 2, 1868. Catherine got sick, the record does not reflect what the illness was, and she died in 1872 at age 25. A year before her death, Joseph sent money back to France to bring his brother Louis, his wife Catharine, and their six children to the United States. Louis started a leather goods and shoe repair store in Folsom but his wife Catharine died on June 11, 1878, at 38 years old. On December 24, 1876, Joseph married again, this time to Martha Ella Smith of Deer Valley near Coloma, California (El Dorado County Historical Museum Collection).

Also, at this time Joseph purchased the Mormon Tavern, located along the old Clarksville-White Rock Emigrant Road. It was built in 1848 by a Mormon named Morgan and in 1851 it became a Pony Express station for the Central Overland Pony Express (Drake-Maurer). On April 4, 1860, Pony Express rider William Hamilton embarked on the first trip eastward (Drake-Maurer). Over the years, Joerger slowly bought up property and soon had over 3,000 acres in the El Dorado County area and began his cattle operation. Some research indicates that Joerger was driving his cattle to Martis Valley as early as 1856, or perhaps earlier, and this enabled him to acquire grazing permits because of continued use (Jackson et al 1982:191). Although, there is no specific record of these early trips, Joerger did begin working with Windmiller and Stewart in 1856 so they may have traveled to Martis with their sheep. A letter written by his mother-in-law, Martha's mother, on June 6, 1877 (El Dorado County Historical Museum Collection), reveals that they were driving the cattle to the Martis Valley for the first time. The couple had nine children, three of whom were born at the summer ranch in Martis Valley and six born at the winter ranch in Clarksville. The stories told by relatives and descendants reveal that the cattle drives were five to six days long and the cattle were milked in route so they would not stop producing it. People living in communities along the route learned about this practice and would bring buckets to receive free milk. Joseph and the older boys would drive the cattle while Martha, the girls, and the younger boys would ride up on the train and meet them in Truckee. This continued until 1900 when Joseph, approaching 70, turned over the business to his eldest son, Joseph Emil Joerger (Lindstrom 2011).

The younger Joseph continued business operations in the same fashion until the 1930s, when he moved the business to a new location on the south end of his property (Lindström 2016). He also began transporting the cattle by train and truck. Joseph Joerger Sr. died in 1914 in Oakland, California. His family remained in the Sacramento area and the property known as the Kyburz place was gifted to his daughter Frances from his first wife Catherine, as part of her inheritance. That property would eventually be sold to the El Dorado Hills West Development Corporation and is part of the present day planned community of El Dorado Hills, CA (Lindström 2016, McGlashan 1982, Rucks 2011).

CHAPTER 3: MATERIALS AND METHODS

Research Design

In the early 1850's, the young pioneer Joseph Joerger, whose summer farm is the subject of this research, was the first in the Folsom-Latrobe area to stake his claim on its grassy hills and purchase a herd of cattle to meet the needs of the mining camps. Several cattlemen and sheep herders would follow suit soon after (McGlashan 1982). These foothill ranchers, mostly from France and Switzerland took what they knew about livestock and applied it to their new home. During summer the grass and water dry up in the foothills so there was a need for grazing lands that could sustain a large herd through these warmer months. Guided by their experiences from Europe, they set their sights on higher, Alpine-like meadows further north.

Although there exists some limited information on these men from interviews with descendants, photos, and newspaper articles, little is known about their daily lives, interactions with local Native American populations, employment practices, technology, family life, or changes that inevitably took place in their operations over the years. In general, there is a limited availability of historic-era ranching sites to study in California. Urban development and expansion have wiped out many of these sites and their importance to our understanding of California's development cannot be understated (Catts 2001, Huddleson and Supernowicz 2009). One goal of historical archaeology is to develop theories and methodological approaches that can illuminate understanding of the

role and significance of the farm in North American history (Catts 2001). President Woodrow Wilson (1895:369) said it best when he stated “Local history is the ultimate substance of national history”.

Initial research reveals that little work has been done on the history of ranching in California. There could be multiple reasons for this apparent gap in the literature; the lack of available sites to study, archaeological work in California is largely performed by private Cultural Resource Management (CRM) companies and their work could be buried within inaccessible grey literature. As mentioned previously, research in the state is focused on the more glamorous topics like California’s prehistoric periods, Spanish missions, the railroad, mining, logging industries, and historic towns. Where ranching is concerned, there appears to be a lack of knowledge that should be addressed.

This project adds to the understanding of agricultural development in California from the Gold Rush moving forward. It adds to the narrative of historic rural development and the growth of agriculture in the United States. It also tells the story of a pioneering family who left its mark on this region and adds to the historical record by contributing to what is known about life on early California ranches.

Theoretical Approach

An understanding of historical archaeology when compared to prehistoric archaeology in the United States is necessary to understand the theoretical approaches that one may employ to research a ‘historic’ site. A distinction between historical and prehistoric archaeology is not widely accepted in the field. With the exception of

Australia and Africa, most archaeologists outside of the United States define their research by historical periods (Funari et al 2013:3). Historical archaeology as a discipline first emerged in North America over 30 years ago. Its focus on material remains of literate societies capable of recording their own history. This is different from prehistoric archaeology which investigates the material culture and history of societies who didn't record their own history in the format of written texts (Funari et al 2013:2). Today in North America, historical archaeology is understood to be the use of all possible remains of material culture, including written documents, to reconstruct and understand how societies have developed since the beginning of European influence in the 15th century (Henson 2010:66). Through the study of aesthetics, philology, the development of artifact histories through the use of ethnographic and anthropological approaches, and a study of analogies, historical archaeological theory builds upon the knowledge gathered from documentary or material sources acting as a blinder and focusing on the most important bits of information (Henson 2010).

With this in mind the theoretical approach that guides this project is the contextual approach. As a result of the development of historic preservation efforts, a variety of concepts were invented including the idea of a historic context (Stipe 2003). A historic context may be defined as "a broad pattern of historical development or an analytical framework within which a property's importance can be understood (Hardesty and Little 2000:162). In order to gain a deeper insight into the North American experience, a contextual approach to understanding the site is used. This allows the researcher to form explanations of social meanings constructed through a balanced

assessment of artifacts, documents, and spoken memories (CalTrans, 2007). Artifacts do not necessarily have fixed meanings since meanings depend on the context of their use. “Themes of spatial-temporal ordering, contextual reconstruction, and taxonomic exploration afford common ground for archaeological research” (Phillips & Willey 1953:618). Through contextual exploration, “we can ask about the human and physical environment, the organization of labor, the size of a settlement, and the exchanges of matter, energy and information” (Hodder and Hutson 2003:162-163). There should be no presumption that life was the same from one place to another and a contextual approach leads to a better understanding of the reasons why people made the decisions they made.

With the development of historical archaeology, archaeological evidence does more than just fill in the gaps of history. Historical archaeology enables more analysis of past lifeways and social processes (Little 1996, p.45). Access to and incorporation of written documents and photographs, which give a researcher insight into what people felt and shows images of what they experienced, coupled with specific archaeological evidence found at sites, allows for richer understanding of what might have been experienced. This shift has led to more interest in subjects including; European expansion and colonialism, capitalism, power, domination and resistance, gender and class issues, ethnicity, and economics. The historical context and contextual analysis of a site puts in perspective what the subjects were experiencing and will hopefully shed light on their decision processes.

To understand life at the Martis Valley Old Joerger Ranch, it is important to establish definitions of family and household. There exists a plethora of definitions of

these concepts. The social unit referred to as the household or family means many different things depending on what region of the world one is from, what time period, and what context surrounds the research. Discussions of the topic tend to identify two groups with one based on function and the other on kinship. This helps avoid preconceived notions about their familial relationships. (Bonine 2004). For purposes of this research, the household is defined as a fluid space where the social unit of the family, consisting of those who manage and influence the household, and those that reside there for all or part of the time being studied (Anderson 2004, Battle 2004). Some archaeologists have defined the household based on the activities performed there rather than the physical structure where the activities were conducted, or on the kinship of the inhabitants (Blandon 1994; Meadows 1999; Wilk and Rathje 1982). A working ranch with extended ties to the community through employment or kinship can complicate the idea of the family unit and possibly obscure what is found at a site. For this study's purposes, family is defined as spouses and children living under one roof and the household includes anyone residing at the ranch who is part of the family, extended family, or there for work related purposes, who may reside in separate structures and participate in household economic production and shared activities such as household meals and pooled labor.

While the concepts of space and boundaries are essential to the archaeology of households, placing these arbitrary walls around the subject of the study might lose sight of the dynamic human interactions taking place throughout the property (Anderson 2004). A household or family can also be complex on a ranch. It can consist of a group of households who share one or more of the traits of an individual household, such as

kinship, economic interdependence, or just bounded there by space and structure (Barile 2004). Since so many variables can shape the idea of household some authors choose to look at a site like a ranch or plantation as a nested household which allows for various levels of household to be present at one site (Anderson 2004, Barlie 2004). Household archaeology can be used to study many aspects of past life including: colonial expansion, power dynamics, technological change, use of space, gender and ethnic issues, and subsistence practices (Barile and Brandon 2004; Beaudry, Fogle, and Nyman 2015).

Literature Review

The Gold Rush's influence on agriculture in California was profound. The population boom created demands for food but land rights were hard to determine: "Mining practice, established in California by trial and error, held that a garden or grain field could be invaded and dug up at the slightest suspicion of the presence of gold" (Dilsaver 1986:70). In 1852 a special census, three years after the rush began, listed 95% of all men in the California foothills as miners and the rest of the world was called upon to provide goods to sustain their appetites. Gold was the only commodity of the region and the only payment accepted (Margo 1947 in Dilsaver 1986). Dilsaver describes three phases of agriculture during the time period from 1848 to 1920. First, the haphazard establishment of small gardens and grain fields to solely support the mining industry. Its second phase took place towards the end of the 19th century when agriculture expanded and provided opportunities for men leaving the dwindling mining industry. The final

phase occurred in the first two decades of the 20th century when California agriculture faced new challenges including fluctuating markets, wartime, and competition.

Mining and logging in the Martis Valley, with its proximity to the railroad, kept business booming for the Joerger ranch. From 1860 to 1880, despite an abnormally high emigration out of California, northern California experienced an increase in population of almost 33% (Dilsaver 1983). The 1880 census reveals that the two new groups moving in were workers employed in professions other than mining, and unemployed dependents (Dilsaver 1983). The mining exodus was due to reduced mining operations in California and the discovery of silver in Nevada beginning with the Comstock Lode in the late 1850's. The mining regions in Nevada were less suited to agriculture and actually generated a new market for agricultural products from California.

The influx of families to this rugged region opens up new avenues of study when looking at these early ranching sites. The typical late 19th and early 20th century ranching operation consisted of a home ranch with outlying camps and temporary sites often used for corralling, watering, and shipping (Waechter and Lindström 2014). According to oral interviews with family members, the Joerger Ranch was a seasonally used, alpine dairy ranch, that kept the cattle comfortable and grazing when the hot summer months in the lower elevations dried up the grass and water each year. The entire family and staff would pack up each year and drive 600 to 700 cattle from El Dorado Hills to the Martis Valley (El Dorado County History Museum Collection).

Archival Research

Archival research for this project was conducted at the El Dorado County Historical Museum in Placerville, California; Placer County Archives and Research Center in Auburn, California; and the Searls Historical Library in Nevada City, California. Records retained by the U.S. Army Corps, Sacramento District, were also reviewed for information on the Joerger Ranch and surrounding community. These records included a records and literature search conducted at the North Central Information Center, Sacramento State, for an earlier project, and multiple cultural resource reports from the Martis Lake and Dam project. These sources were used in the development of the historical context of the site.

Survey

This site was previously surveyed by two Army Corps archaeologists in 2011 (Griffin and Perry 2011). Several artifact deposits and features were noted on the site form. To become familiar with the current conditions of the site and determine the best areas to excavate test units, a site visit was conducted on August 19th and 20th, 2017, by Corps archaeologists Jack Pfertsh, Geneva Kraus, student archaeologist Hope Schear (this study's author), and an outside volunteer and camp chef, Bryan Schear. One hundred percent of the site was surveyed and all visible surface artifacts were flagged to establish the outer perimeter of the artifact scatter and identify any features or artifact dense activity areas. The team used a Garrett Ace 250 metal detector to find activity

areas covered by soils. A Trimble Geo 7 Series handheld Global Positioning Satellite (GPS) technology was used to map the perimeter of the site, notable features, and artifact-dense locations. Further information on the survey is included below in the results section of this document (Figure 4 and 5).



4. Survey site, August 2017, Old Joerger Ranch.



5. Unknown date, Old Joerger Ranch in Martis Valley, CA, when it was still operational. Facing northwest, structures from left to right: chicken house, privy, Mabel and Joe Joerger home, milk house, corrals, May and Roy Joerger home, boy's cabin (Lindström 2016, p.108).

Methods

Data Collection Methods

After completing an intensive pedestrian survey to establish site boundaries and assess possible testing locations, archival research was completed at three repositories responsible for preserving historical documents for the counties of El Dorado, Placer, and Nevada. Ms. Susan Lindström, an archaeologist who is considered an expert in the Martis Valley region, was also interviewed. A review of Corps records of the site including earlier survey work, records gathered from the California Historical Resources

Information System (CHRIS) by Corps professionals, historical material about the dam and park property, and other cultural resource documents housed in our work library provided to the Corps for various projects in that area was completed.

Field Methods

Testing Plan. The field survey, conducted in August of 2017, helped to establish the site boundary and revealed several artifact scatters and features that warranted further investigation. The relationship between surface and subsurface deposits varies between sites therefore, excavation, which yields the most reliable evidence for human activity at a particular period in the past, was conducted to show how those activities changed over time (Renfrew and Bahn 2008). A full excavation is not necessary or required to determine if a site has potential to yield important information on history, so small test units identified as possible activity areas were placed in various locations around the site. The results of the testing conducted at this site has been used to determine its period of significance and if the site retains sufficient integrity and data potential to convey meaningful information about the history and lifeways of early ranchers after the 1849 California Gold Rush.

On July 6, 2018, a team of volunteers traveled to Martis Valley to conduct testing on the Joerger Ranch site. Access to the site was necessary from the 6th of July through the 9th of July. Since there was a limited timeframe and excavation is destructive, 1 x 1-meter standardized test units and auger tests were used to excavate in and around the areas that were determined most likely to be activity areas or homestead foundations. The activity areas had higher concentrations of artifacts than other locations around the

site and the possible foundations were depressions with slightly different color soil or had rocks or bricks around them. Units were placed in locations that might be homes, workspaces, or that suggested a prime space for out buildings, a privy, or kitchen refuse pile to hopefully increase the chance of finding the greatest concentration of artifacts that could reveal the greatest amount of information about the site. The standardized size was less destructive and good for comparative volumetric data (Carmichael et al, p. 51). For consistency, each unit was excavated in arbitrary 10-centimeter (cm) to 20-cm levels measured below ground surface (bgs) until sterile soil was reached. The units were expanded if necessary or closed if nothing was uncovered within 1 meter. Levels were sifted through 1/4-inch mesh hardware screens onto a tarp to ensure as many artifacts as possible were located (Carmichael et al. 2003). Photos were taken at the beginning and end of each unit and notes were taken while excavating each level. Notes consisted of artifact, feature, and soil descriptions along with measurements and sketches.

Field Data Collection and Analysis. Curation is a critical issue in archaeology. Once an object is removed, its original meaning or purpose can be lost unless properly documented (Ewen 2003). In an attempt to preserve the site's integrity, and avoid not only the added cost of curation, but adding to the ongoing crisis of space at curation repositories around North America, physical items from the site were not collected or removed. The archeological process consisted of field documentation and analysis of the artifacts. Photos of unique artifacts, measurements, provenience, which refers to the three-dimensional location of the artifact in space, and notes about each recovered item was recorded on site forms. Once all data on the artifacts in a unit was extracted, the

items were returned to the unit where they came from, and they were reburied during backfilling of the units. This site is a mixed component site and although the focus is on historic era items and what those items revealed about early ranching, we were prepared to record all information found at the site in a consistent fashion.

Expected Data.

- Photos: Images of the site, testing operation, and unique artifacts
- Measurements: Site measurements, unit measurements, artifact measurements, distance measurements between site features.
- Maps: Aerial location map, site map
- Drawings: Layer sketches, stratigraphic layers, and artifact drawings
- Descriptions: Daily notes on activities, conclusions regarding what is being uncovered; where and what the items might have been used for, descriptions of the artifacts and features, and what they were or might have been.
- Counts: The count will include the number of artifacts found in each unit, a breakdown by category of how many artifacts are found in each unit, and the number of similar items found throughout the entire site.

Historic artifacts were classified in accordance with their functions and each artifact was classified into a particular category, group, and, if necessary, subgroup. This process is defined by Chenhall (1978), as revised by Blackaby and Greeno (1988) and is made with regard to a functional analysis approach proposed by Sprague (1981). This approach allowed for an interpretation to be made about the use of space within the site, based on a comparison of these different functional categories for individual

proveniences within the site. An example of the categories and table that was used to track the information is provided in the appendix (Appendix D).

Data Analysis and Management Plan

In the field, artifacts were sorted into categories, recorded on site forms, and some were photographed, measured (approximate weight/length/height/width) and drawn. Notes were taken about where all artifacts were found within the site and within the unit before being placed back into the ground. Organizing the artifacts into categories made the data more meaningful and manageable (Ewen 2003). Gathering as much information as possible while in the field was an important step in analysis to ensure that there was enough information not only for this study but information of value to others in the future (Ewen 2003). Each item within a layer was dated as accurately as possible. Information available through reference books and the internet provided insight into the possible age and use of the different historical objects. The process of categorizing data is subjective and it is important to remember that it is not as much about the category used as the questions these categories can answer (Ewen 2003). Categories and provenience information can be used in the spatial analysis of an archaeological site. Spatial analysis involves analyzing the placement of objects within a site and artifact density. The differences in density and distribution can reveal activity areas (Ewen 2003). The categories being used, coupled with a qualitative spatial analysis of the site, not only allowed for a determination of whether or not sufficient data was present that can contribute to the history and development of ranching in this area, but also aided in

determining if there was sufficient integrity at the site for it to be considered eligible for the National Register of Historic Places (NRHP).

Data Format and Curation

In the field. Handwritten notes and sketches were taken that convey observational information about the site, the objects, and the unit. This includes preliminary categories, theories regarding the objects and their relation to other features or objects, measurements and weights if necessary, as well as drawings of the unit itself. Digital photos and GPS points were also taken and site forms were fully filled out.

After the field. The physical site forms and drawings were digitally scanned and then shredded, so they would not need to be stored in a secure location. The photos were downloaded into a jpeg format and GPS provenience information was turned into shape files that are compatible with ArcGIS for post-processing. The site forms have been reviewed and all of their information recorded into an Excel spreadsheet. The artifacts were then researched and placed into final categories that include their origin, any known use, and dating information. The raw information will be kept on a personal hard drive for five years as well as being shared with the U.S. Army Corps of Engineers, Sacramento District.

In the document. Imbedded within this thesis document and its appendices are, site photos, ArcGIS maps, and tables describing the data.

Long-Term Access to the Data and Sharing Practices and Policies: Throughout the project care was taken to preserve the record of this data for long-term use. All site records will be shared and will include a recommendation of eligibility. This thesis will

be shared with the U.S. Army Corps' Sacramento District's, Cultural Resources Section and the relevant California Historic Resource Information System (CHRIS) responsible for the county from where the information was gathered. This will ensure long term access for qualified professionals and students, and the protection of sensitive site location information. A digital copy and hardcopy of this thesis will also be on file with the Humboldt State University Library. This information will be available indefinitely upon request from the repositories managing the information.

Historical-Era Research Questions and Data Requirements

As noted above, the site is a historical-era ranch and an appropriate research theme is ranching. Thematic frameworks are used as a tool to develop a holistic story about a site. It allows the researcher to paint an evidence-based picture of past lives (Hardesty & Little 2000). This site not only contains a household but also a business, and research issues pertaining to a ranching theme involve economics, technology, ethnicity, social organization, family life, health, and land use (Hardesty & Little 2000, Waechter & Lindström 2014). A list of research questions and their data requirements specific to evaluating the period of significance, integrity of the site, and the ranching theme are listed in Appendix A. These questions are not only relevant for evaluating the significance of the site and what integrity is still present at the site, but broad enough to encompass the many lines of inquiry that could be pursued at a site such as this one.

CHAPTER 4: RESULTS

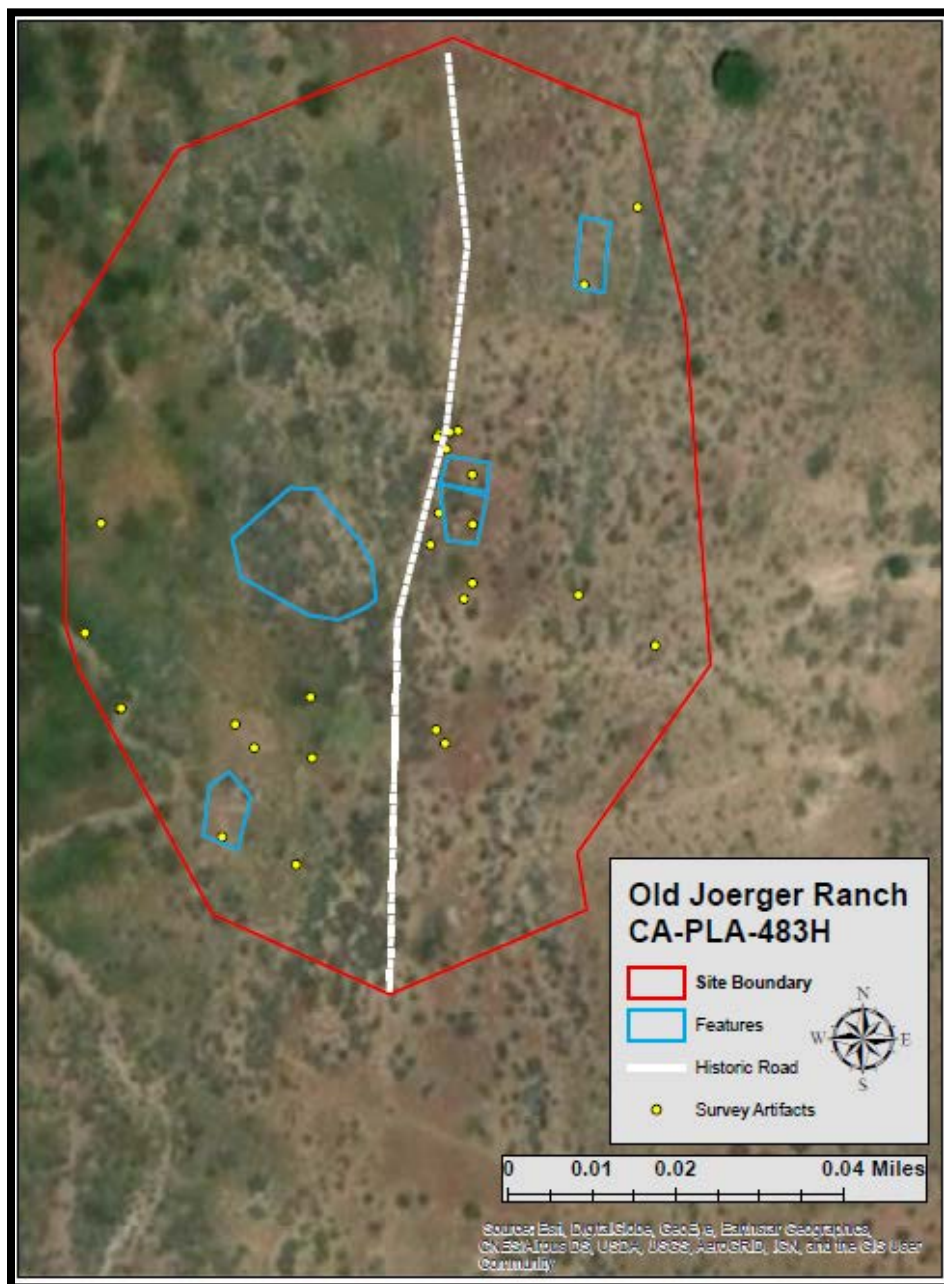
Phase 1: Pedestrian Survey

As noted above, the Old Joerger Ranch, which has been given the site number CA-PLA-483/H, was first surveyed in 2011 and an additional intensive pedestrian survey of the project site was completed on August 19th and 20th, 2017 to establish the current condition of the site and determine the best areas to place test units (Figure 4). The artifact scatter, which denotes what is left of the Old Joerger Ranch site, covers roughly 2.8 acres. Ground visibility was very good and one hundred percent of the site was walked in 5 meter transects while flagging visible artifacts. Two flags were placed at artifacts that appeared diagnostic so that GPS points could be taken of their location. A metal detector was also used to reveal any artifact concentrations that might have been covered by soil.

Findings

A Trimble Juno GPS unit was used to record points at the artifacts flagged as diagnostic. These included polygons for five feature depressions, two with heavy artifact concentrations, the outer perimeter of the site, and a linear alignment of what appears to be an old two track wagon trail going directly through the center of the site from south to north (Figure 6). The surface of the site was moderately disturbed and the depressions appeared to be shallow, it was unclear if intact archaeological deposits would still be

present based on the condition of the surface. It was evident at that time that further testing would be required to determine if intact archaeological deposits were still present below the ground surface and what the integrity of those deposits would be.



6. Survey Map: Feature 1-bottom left, feature 2-top left, feature 5-top right, feature 3 and 4-bottom right.

Feature 1

The artifact accumulation at this location was low and the items found have been placed into three categories; Structures, Personal Artifacts, and Packages and Containers (Table 1). Although a concentration of artifacts was present at this location, the low density did not make it clear if this was the site of a structure or just where items have settled after many years out in the open elements.

Table 1. Feature 1, Survey Artifacts.

Category	Artifact	Count
Structures	Window glass (aqua)	Multiple
Personal Artifacts	Women's leather boot upper	1
	Heel of a shoe with nail knobs	1
Packages & Containers	Clear glass with a milk bottle finish	1

Packages and Containers. The clear glass fragment with a milk bottle finish would have been purchased and used post 1884, after the glass milk bottle was invented by Dr. H. D. Thatcher of Potsdam New York. He developed the glass container to provide a more sanitary way to store and transport milk after watching a child drop a doll into the commonly used metal milk containers that required ladles (Potsdam Public Museum, N.d.).

Personal Artifacts. Two artifacts, a woman's leather boot, upper portion and the heel of a shoe with nail knobs have been further classified as Clothing/Footwear. Their date of use could not be determined but they are a gendered clothing item that represents a style worn at some point while the ranch was in use.

Structures. The slightly aqua-tinted window glass is further classified as a building component but is undiagnostic (Figure 7). Aqua glass has been used for many products since the beginning of glass production (Fike 1987: 13).



7. Feature 1, overview facing north.

Feature 2

This moderate concentration of artifacts was within a 5'11" by 5'5" area of coarse rock and brick placed in a single, circular layer (Figure 8). The items observed are categorized under Natural Resources Tools and Equipment, Structures, Science and Technology Tools and Equipment, and Packages and Containers (Table 2).

Table 2. Feature 2, Survey Artifacts.

Category	Artifact	Count
Natural Resources Tools & Equipment	Cut Nails	80%
	Round Nails	10%
	Spikes	8% Large
		2% Medium
Packages and Containers	Milk Canister	1
Science and Technology Tools & Equipment	Split nail knob (lower half) with the nail in it	1
Structures	Handmade sand-struck bricks	Multiple (some intact, some fragmentary)

Natural Resources Tools and Equipment. The cut and round nails and the large and medium spikes are further classified under woodworking items (Figure 9). They could represent what is left of a small structure like a privy or storage shed.

Packages and Containers. The upper portion of a tin milk canister was further classified as a product package. These canisters replaced a heavier wooden version and were used to store and transport milk and butter during the 1800s and early 1900s. They were in use until the 1930s for storage and transport but were slowly replaced by the more sanitary glass containers and large on-farm storage tanks (Antique Trader Staff, 2018).

Science and Technology Tools and Equipment. The porcelain nail knob is further classified as Electrical but has no markings and no cap. It appears to match a type produced from 1884-1930 (Gish 2018). Nail knobs were commonly used for household wiring and mounted to studs and rafters (Gish 2018). Because of the unprofitable expense to private electric providers, most American townspeople and farmers did not have access to electricity until the Federal government took action in 1935 with the

establishment of the Rural Electrification Administration (Meyers 2010). The presence of nail knobs at the site suggests Mr. Joerger, or more likely his son after he took over the business had a personal generator or was close enough to an existing transmission line to bring electricity to the property. Electricity was a luxury during this time period. Its presence on site shows they desired the comfort and convenience electric power brings to one's life, kept up with current technological trends, and were doing well enough financially to afford it.

Structures. The handmade sand-struck bricks are not well struck and do not carry any markings. They are classified as building materials and are not diagnostic. Brick manufacturer John Ryan produced bricks for the Sacramento and San Francisco markets beginning in 1854 and his brickyard, located at 13th and Y Streets, is believed to be the first commercial brick yard in California (Mosier 2003). The presence of bricks suggests that the family was either able to create what they needed from the clay onsite or brought these with them from Sacramento.



8. Feature 2, overview facing northwest.



9. Feature 2, nail concentration, plain view.

Feature 3 and Feature 4

Feature 3 was a 1-inch (in) deep depression 17 feet (ft.) long from north to south and 14 ft. wide from the east to the west, with boulders placed on a berm separating it from Feature 4. Feature 4 (Figure 10) is a 12 ft. by 12 ft. square depression ranging from 1-in deep on the south end to 6 in deep near the berm separating it from feature three. These are possibly what remains of cold storage cellars and no artifacts are present at the surface.



10. Feature 3 and 4, facing northwest.

Feature 5

Feature 5 is a leveled area located on a slope, 20 ft long from north to south and 14 ft wide from east to west (Figures 11 and 12). This space coincides with the location

marked “boy’s cabin” in the historic photo of the ranch (Figure 4). Items found in this space are classified as Natural Resources Tools and Equipment, Packages and Containers, Science and Technology Tools and Equipment, Structures, and Unclassifiable Artifacts (Table 3). Some of the artifacts also appear to have been through a fire.

Table 3. Feature 5, Survey Artifacts.

Category	Artifact	Count
Natural Resources Tools & Equipment	Wire nails	>120
	Iron strap hinge	1
	Fragments of plain white earthenware	35
	Green carnival glass mug handle	1
Packages and Containers	Church key open beverage cans	7
	Sanitary can opened	1
	Milk glass base	1
	Amber glass base	1
	Olive kick up base	1
	Purple glass bottle body	1
	Amber glass with a pharmaceutical neck finish	1
Science & Technology Tools & Equipment	30 Caliber Cartridges no head stamp	2
Structures	Window glass (aqua tint)	Numerous fragments
Unclassifiable Artifacts	Leather	1

Natural Resources Tools and Equipment. The surface of the feature is covered with more than 120 wire nails in large, medium, and small sizes. These are classified further as Woodworking items. Also present under the Woodworking category is an iron strap hinge which might have been used for a door. The 35 fragments of plain white earthenware and the green carnival glass mug handle are classified further as Food/Food Service items.

Packages and Containers. All of the items observed at this feature under the Packages and Containers category are further categorized as Product Packages. The seven-church key open beverage cans date to 1935 or later when the church key opener was introduced and the rotary opened sanitary can dates to 1925 or later when this method of opening sanitary cans became popular (Horn 2005). The glass items were all fragments from different containers. Their colors and finish can help determine their age and use. Milk glass dates from 1890 to 1960 and was used for medicines, cosmetics, toiletry, food, and specialty items (Fike 1987). Amber or brown glass has a general application but was commonly used for alcoholic beverages after 1860. Green or olive glass is often used for wine and mineral water vessels beginning in 1865 to the present, and purple glass, which is one of the best time markers, was used for many items from 1885-1920 (Fike 1987, Horn 2005).

Science and Technology Tools and Equipment. The two 30 caliber cartridges are classified as Armament/Ammunition and do not have head stamps so they are undiagnostic.

Structures. The slightly aqua tinted window glass present on the surface may represent a window on the south wall and is classified further as a building component. These fragments are undiagnostic.

Unclassifiable Artifacts. The one piece of leather present was classified further as Function Unknown, since it was not clear what it came from and is undiagnostic.



11. Feature 5, facing north.



12. Feature 5, facing south.

Two Track Road

The two-track road does not appear on historic maps and was most likely an unnamed road created by the family to access their ranch property from the main transportation corridor known today as California Highway 267, which led from the Central Pacific Railroad stop in Truckee, California (Figures 13 and 14).



13. Two track road, facing north.



14. Two track road, facing south.

Surface Artifacts

Scattered throughout the 2.8-acre site were numerous artifacts. A sudden unexpected storm on the last day prevented all of the artifacts from being photographed, but a representative sample, in no particular order, is provided below (Figures 15, 16, and 17). These individual artifacts, some diagnostic and some not, have been placed into the categories of Natural Resources Tools and Equipment, Personal Artifacts, Packages and Containers, Recreational Artifacts, Science and Technology Tools and Equipment, Structures, and Unclassifiable Artifacts and classified further in Table 4 below.

Table 4. Individual Surface Artifacts.

Category	Sub Category	Artifact	Count
Natural Resources Tools & Equipment	Food/Food Processing	Cast iron stove parts	6
		Milk glass lid liners	2
		Sheet metal strainer bucket with brass screen soldered over the opening	1
		Sheet metal lard bucket w/ soldered lugs	3
	Woodworking	Hammer head broken from use	1
		Fence post	1
Personal Artifacts	Personal Gear	Brass pocket knife with a pearl veneer over the handle	1
Packages and Containers	Product Packages	Glass container fragments	7
		Open beverage cans with church key openings	>6
		Milk glass lid liners	3
		Three-piece oval fish tin that has been hand soldered	1
Recreational Artifacts	Toys	Childs doll plate	1
		Cat's eye marble	1
Science and Technology Tools & Equipment	Armament/Ammunition	Bullet casing with head-stamp	4
	Electrical	Clear glass insulator	1
		Light green insulator	1
Structures	Building component	2-HLT crimp seam sheet metal. Used on sheet metal roofs	1
Unclassifiable Artifacts	Multiple Use Artifacts	1" sheet metal barrel hoop	1
		1 1/2" sheet metal barrel hoop	1
		Heavy gauge sheet metal bucket with a heavy bail hand	1
		Sheet metal basin with wire gauge rim gathers	1
	Function Unknown	Threaded 1 1/2" pipe nipple	1

Natural Resources Tools and Equipment. Fourteen items observed during the surface survey have been placed into the Natural Resources Tools and Equipment category. Those items include: six parts to a cast iron stove, two milk glass lid liners, three pieces of a sheet metal lard bucket with soldered lugs, and one sheet metal strainer bucket with a brass screen soldered over the opening. These items were further classified as Food/Food Processing items. None of the items could be definitively dated but the milk glass liners would have been in use between 1871 and 1950. They were used as a sanitary item to keep food separate from the metal lids on mason jars and other containers (Whitten 2004). A wooden fence post and the head of a broken hammer was also found and these are further categorized as woodworking items. The hammer did not have any identifying marks.

Personal Artifacts. One personal item, a brass pocket knife with a pearl inlay handle was classified further under Personal Gear but no identifying marks were present and it could not be dated.

Packages and Containers. Over 13 glass fragments classified as Product Packages were found. One broken clear glass Mason jar with a slightly straw-colored tint dates no earlier than WWI and no later than 1950. The straw color is caused by the de-coloring process to make clear glass. Selenium and/or arsenic is used as the de-coloring agent and as the bottle is exposed to sun it turns a slightly yellowish or straw tint (Lindsey 2018). Purple-pressed glass body fragments were recovered that can be dated to between 1885 and 1920 (Horn 2005). There were also two purple pharmaceutical glass bottle necks. One has a hand-applied prescription finish and other a hand-applied bead

finish. The prescription finish is the most common one used for druggist, drug store, and prescription bottles made between the 1870s and 1920s (Lindsey 2018). Tooled finishes on smaller bottles however began to dominate the industry by the 1870s, so this could be a bottle that was reused or one made at the tail end of the 1870s (Lindsey 2018). The bead finish was also fairly common and dates to around the same time period based on its color. One amber glass bottle neck with a hand-applied brandy finish was found and also dates to early in the historical period. Amber glass was used widely after 1860. Larger bottles began to change to the tooled finish, seams made from a mold, in the mid-1880s with the majority being tooled by the mid-1890s (Lindsey 2018). However, hand-applied finishes are widely used prior to the introduction of the automatic bottling machine in 1914. Other glass found on site and considered undiagnostic includes: a dark blue square base, olive green liquor bottle with a kick-up base, and the upper neck of a cream separator. Several additional glass pieces were found with maker's marks embossed on them and are presented in the table below (Table 5).

Table 5. List of Glass Embossed with Maker's Marks.

Glass Color	Maker's Mark	Description
Clear	7/F in the middle of a circle and Diamond overlapping/8/1948 (Clear)	The f was most likely miscopied and is actually an "I". This would have been a product of the Owens-Illinois Glass company. The 7 stood for the plant number and the 8 stood for the last number in the year it was made. Plant 7 was located in Alton, IL from 1930-1983. The 1948 on the bottle represents the year it was made. (Witten 2004)
Amber	"PCGW" on the bottom of a 3" diameter round base.	This mark represents the Pacific Coast Glass Works that was in business from 1902-1924. (Toulouse 1971, p.416)

Glass Color	Maker's Mark	Description
Milk glass	"_INOL/_CO"	Resinol/Chemical CO/BALT'O MD. Dates from 1897-1948. Cosmetic jar containing Resinol which was used for skin disease, inflammation, and irritation. (Fike 1987, p.75)
Purple	"_RICE/_IOUS/_E	Dates to between 1890 and the early 1920s due to the color (Fink 1987). Could not match the letters from the label embossed on the glass to any specific item.
Light green	"PRIVATE MOULD/NO.7"	Green glass was frequently used for wine and mineral water and although I could not match the label to a specific item or entity it dates to 1865 or earlier based on the distinctive color (Fink 1987).
Aqua/Light green	"AND TAR/_CO._O, USA"	Foley's Honey and Tar/ Foley & Co. Chicago Ill, USA. This item was made between the late 1800s to the mid-1960s. It was sold as a cough syrup that would soothe the throat and lungs. (Fink 1987, p. 59)
Aqua	"_RN/_NDARD/_XTRA"	Potentially diagnostic but the letters on the bottle did not match any specific item and aqua glass was widely used for many products from the 1800-1920 (Horn 2005).

Also found and classified as Product Packages were over six open church-key beverage containers and a three-piece oval fish tin with a hand-soldered bottom. The fish tin is considered diagnostic and dates to before 1880 (Horn 2005). Unfortunately, the beverage containers were too heavily corroded to determine who might have produced them or what they contained but church-key openers were introduced to the market in 1935 which suggests deposits at the site after the ranch ceased operations.

Recreational Artifacts. Four items classified as Recreational Artifacts and further classified as Toys were observed while surveying the site. These items include two cat's eye marbles, a child's doll plate, and a child's tea set water vessel.

Science and Technology Tools and Equipment. Two glass insulators and four individual bullet cartridges with head stamps were found on site not associated with a particular feature. The insulators are further classified under Electrical. The clear glass insulator was undiagnostic but the light green insulator had a maker's mark on it. The mark was the image of a triangle pointed down with a W above a T in the center of it. This mark stands for Whittall-Tatum & Co. and dates to between 1935 and 1938 (Toulouse 1971, p. 544).

The four diagnostic bullet cartridges found are further classified as Armament/Ammunition. The first head stamp is, W.R.A. Co/303 SAV, and was made by Winchester Repeating Arms Company. It was developed in 1895 as a potential military round and was introduced to the public in 1899 with the Savage Model 1899 lever action rifle. The rifle was discontinued during World War II but the ammunition is still made today. This casing dates between 1899 and 1934. In 1934 the headstamp changed to just W.R.A. (Pfertsh 2015). The next cartridge's head stamp is, REM-UMC 25-35, made by Remington Arms Co. and Union Metallic Cartridge Co. This 25- to 35-caliber rifle shell was sold for small game rifles and was possibly sold as experimental ammunition. It appears in the Winchester catalog #73 in 1907 and from 1910-1911 in the UMC catalog before Remington and UMC joined their businesses in 1911, but doesn't appear in later catalogs. Both of the last two cartridges, WRA Co/25-35/W.C.F. and WRA

Co/30/W.C.F., were introduced in 1895 and manufactured for the Winchester Model 94 lever action rifle and date to 1934 when the head stamp was changed to W.R.A (Pfertsch 2015).

Structures. One piece of sheet metal with a 2-HLT crimp seam appears to be a roof covering and has been further classified as a Building Component. Although it was found near several features it could not be definitively associated with any particular one.

Unclassifiable Artifacts. All of the items under this category were found to be undiagnostic. Items include: one threaded 1 1/2" pipe nipple, 1" sheet metal barrel hoop, 1 1/2" sheet metal barrel hoop, heavy gauge sheet metal bucket with a heavy bail hand, a sheet metal basin with wire gauge rim gathers, a house shoe, a mule shoe, and one decorative purple glass, possibly from a vase, bowl, or lamp shade. These items were found in different locations throughout the site and their primary function is unknown. Sheet metal appears to be common product used for different purposes on this ranch.

A definitive date for the site based solely on the surface artifact assemblage could not be determined. Many of the items found were produced from the late 1800s into the early 1900s and it is unclear when they were brought to or used at the site. This date range is consistent with the date range established by historical research conducted for the site which assumes regular seasonal use from 1876 to the 1930s.



15. Survey artifacts.

Top (Left to Right): Bullet shell 3030 (undiagnostic); Remington Arms Co. /Union Metallic Cartridge Co. (REM-UMC/25-35) - 25 to 35 caliber rifle shell; shotgun shell cap (1901) No. 12 Repeater (undiagnostic).

Bottom (Left to Right): Winchester Repeating Arms Co., Bridgeport CT. (W.R.A Co. /.25-.35 W.C.F.); Winchester Repeating Arms Co. (W.R.A Co. /30/W.C.F.); Winchester Repeating Arms Co. (W.R.A Co. /303 SAV).



16. Survey artifacts.

Top (Left to Right): Clear glass milk jug lip; purple glass with a hand applied bead finish, pharmaceutical bottle neck; undiagnostic clear glass.

Middle (Left to Right): Milk glass cosmetic jar; purple glass with a prescription finish; unidentified purple glass fragment with writing.

Bottom (Left to Right): Broken clear glass Mason jar with a slightly straw-colored tint and a clear glass neck of a machine-made cream separator; straight brandy finish on a hand-blown clear glass bottle, decorative purple glass.



17. Survey artifacts.

Top (Left to Right): Sheet metal milk canister; three-piece oval fish tin with a hand soldered bottom; undiagnostic metal can.

Bottom (Left to Right): Cast iron stove part; miscellaneous sheet metal; metal pan; iron strap hinge.



18. Survey artifacts.

Top (Left to Right): Horseshoe; cat's eye marble, marbles became widely available in the U.S. during the 1920s; child's tea set water vessel.

Bottom (Left to Right): Fence post; mule shoe; damaged marble.

Phase 2: Qualitative Research

Historical research was conducted to reveal data not readily available or accessible in other forms, because of the age of the project site. This research triangulates data from multiple perspectives, allows one to follow the development of ideas through time, document changes to the site over time, and uncover stories or

perspectives of marginalized people (Seale 2012). This data adds another dimension, or understanding, to what has previously been documented and what was uncovered at the site during archaeological testing.

Two methods are commonly used to approach and analyze historical documents. The first approach would be from the perspective of a realist. This approach uses the texts or photos found, as documentary evidence and deems them a factual representation of reality (Seale 2012). This approach can be problematic because the researcher is not considering what is left out or the perspective of the producer or organizer. The second approach, and the approach employed for this study, is a social constructionist approach, which looked at how these documents came to be and why and how they are constructed. To achieve this, contextual analysis was applied to analyze the documents and photographs gathered from the three repositories mentioned above and found while reviewing other reports on the Martis Valley.

Archival Analysis

The total number of hours spent collecting documents and photos, organizing the information, and then analyzing was approximately 115 hours over the course of 15 weeks. The data collected from these documents and photos took on a thematic approach.

Photo Analysis

The photos were scanned into a computer and cropped. Questions formulated to analyze these photos included; who is pictured, when was the photo taken, how was it

taken, is it a still photo or action shot, why was it taken, for whom, and then personal thoughts or feelings were recorded about the images (Appendix C).

Document Analysis

After separating the data into two categories, Public Consumption and Private Consumption, common themes emerged and were noted. To begin, the documents were read through to get a general impression and then the data was analyzed by asking questions of it. These questions can be found under the section labeled, Data Analysis Questions, in the appendix (Appendix C). Not all questions were necessary for every document but the questions were used as an outline that allowed one to think critically about each document. The original questions evolved and were refined for the documents that were collected after visiting the various repositories. The data uncovered was triangulated to try and determine general facts about when events were reported to have happened. The documents include one handwritten letter, three transcribed interviews, multiple copies of newspaper clippings, two magazine articles, four typed family histories, one page from a book that mentions the name Joerger, various grazing and property maps, and one environmental document that goes into detail about the history of the area. During the background research phase of the project several cultural resources reports that included other researcher's thoughts and perspectives on life in the Martis Valley were reviewed and compared to what was found.

The patterns and themes that emerged through this analysis helped shed light on daily life in the late 1800s and early 1900s after the Gold Rush. The insights gained from these documents helped to generally understand the chronology of events and family tree,

expand on what's already known about the site, and add to our understanding of the human experience during the settlement of this region.

Interview Transcription Analysis

Lois Cavitt. The first transcription was an interview of Lois Cavitt on June 25, 1989. The Cavitt family were neighbors of the Joergers in the Martis Valley and the archaeological remains of their ranch established in 1905 is also on Corps property. This was a friendly interview that covered a multitude of topics. The conversation tends to include a large amount of descriptions of where things were in relation to other things and the size of properties owned by neighbors. Ms. Cavitt also discussed riding horses, cattle drives, vehicles she rode in with family members, and the importance of the railroad to the area.

The interview was not very structured. There was an agenda to gather information about early schooling in the county but it didn't take away from what the interviewee wanted to share about her life. There is a wealth of information she wanted to share in these few pages. Crime, love, taboos, expectations, locations, and accomplishments are all covered. The topic of this research, the Joerger family, was mentioned briefly but only mentioned as a family she was familiar with and who were prominent dairy people in the area.

Family

Relationships- The speaker describes who her family members are, who was married to who and how they met and what properties they are associated with. The speaker also discusses events like fires or illness that affected her family members.

Ailments- The speaker does not go into detail about how different things happened but she was paralyzed for a period of time as a child due to an illness and speaks about the frequent headaches her mother had that prevented her from being active in her children's life. These illnesses left a lasting impression on her and paved the way for her eventual career with special needs children.

Important dates- Dates discussed include when important events happened, when people moved, death, birth, and marriage. Divorce is mentioned but not dwelled upon.

Neighbors

Personal feelings about them- She discussed neighbors casually and with fondness. No negative thoughts are shared and she goes into detail about neighbors that helped her family in hard times or when her brothers were out late and could not make it home. The community appeared to be close nit and sparse.

How they knew them- The interviewer will call out specific community members who were in similar occupations and the interviewee explains their level of awareness of that family or person and how and where they know them. School, work, family, proximity, etc. are ways the speaker describes knowing people.

Memories of Events

Events that stood out to this interviewee's memory include her relationship with her grandmother, her mother's illness and migraines (was it related to mining or lead?); her bond with her siblings including raising her youngest sister who she raised because of her mother's illness; her own paralysis and how that affected her, and her marriage to a cattleman when she was a city girl. She explained her husband understood his industry

was not hers and she did not actively participate, with the exception of traveling with him for the yearly drives. She also explained in detail her experience with these drives and her fear of moving when the snow began. One year she accidentally forgot a chandelier and some light globes at their Martis Valley home and when they returned the next season to this supposedly uninhabited area those items destroyed and thrown in their large fireplace.

Schooling

This was a huge part of the conversation. This interviewee describes her own schooling but a major part of the conversation was her teaching career in the area. She quit to move several times and frequently filled in for individuals who had been fired. Later in life she was very involved with special education (she makes a point to bring up what they called children with special needs at that time: exceptional children) and her eventual transition into psychology and school counseling. She started several foundations and contributed to the development of standardized testing in California.

Ida McLellan. The second transcription was with Ida McLellan on May 8, 1987. This interview is one of the harder ones to discern and follow. This person's memory is not as strong as the other people interviewed but she still conveyed interesting information about life in the early 1900s and what happened to different spaces around her local area. Most of the detailed information has to do with snapshots in time or events related spatially to people she was asked about.

Transportation

She discussed vehicles she purchased and spent time in that her parents encouraged her to purchase at the beginning of her adulthood. She also discussed her experiences with traveling by train to the local area from Oakland, CA. The family had moved there from Pelee Island, Ontario, Canada, in Lake Erie, after the earthquake in San Francisco. Her father was a carpenter and moving to California offered a better life for his family.

Family

Relationships- Her family relationships stood out the most in her memory.

Ailments- Her stories of moving centered around her brother's sickness. The family was told to move to the mountains for his health. The illness was not referred to by name but it could have been tuberculosis.

Important dates- Moving to Auburn, CA was a very impressionable moment for this person. She described it with great detail and the feelings associated with coming to an uninhabited area. She encountered a cat for the first time when they moved on to their property and it stayed with them for years.

Neighbors

Personal feelings about them- Her memories seemed very scattered but she mentioned the Joerger family and several other families and her feelings of fondness for them.

How they knew them- She described how she knew the families based on when she met them, not where or why. She also mentioned remembering people because of their

sickness and how her mother would go help them. Her mother was a midwife and the local nurse.

Spatial Orientation of Places

This interview concentrated heavily in spatial orientation. The interviewee could not remember much about events, people, or dates, unless it was related to a place. She began many of her stories by relating where something happened.

Memories of Events

Events that stood out were coaxed to the front of her memory by the interviewer. After a few questions, she talked about a neighbor that grew olives and other neighbors who received property through the legal problems of others.

Schooling

She knew she taught at different places but could not tell the interviewer for how long or recall any important events. The conversation about school and her career led back to a conversation about a favorite car.

Calvin Oest. The third transcription was the interview of Mr. Calvin Oest on May 11, 1988. The researcher had a clear agenda but was able to accommodate other story telling that complimented the conversation. Spatial information and feelings about events seemed the clearest to Mr. Oest. Dates, chronological events, and people's names were not as memorable. The Joerger's were mentioned once and referred to as one of the large land-owning families. The speaker remembered the family because of a married female member he had encountered who left a positive impression on him.

Transportation

Mr. Oest mentions how people travelled to places locally and nationally. Some of these methods include horse and buggy, railroads, cars, ship, and their own two legs.

One of the more interesting stories is about his grandfather who left his wife and child in New York to seek gold in California. He took a ship around the “Cape” and was bound for San Francisco but somehow ended up in San Diego by mistake. He decided to walk across the desert with some companions to find gold. He was unsuccessful so he walked back to San Diego and after replenishing supplies walked 40 miles per day to get to San Francisco and eventually made his way to Auburn, Ca. He loved the area so he made his way back to New York, collected his family, and when he reached Panama got a horse and buggy and followed a “donkey train” back up to Auburn where he settled.

Family

Relationships- He spoke about who was related to who, where their family moved to, who was still alive, how parents met, how they felt about certain members of the family, and actions of various family members that stood out in his memory.

Ailments- Injuries and illnesses of various family members comprise a great deal of the conversation.

Important dates- He discussed the births, marriages, and deaths of parents, siblings, and significant others.

Neighbors

He related basic information like who they were, where they lived, and their occupations.

Personal feelings about them- As he related information about one neighbor or another, he mentioned his feelings about them. Whether they were good people or nice people. No ill words were spoken.

How they knew them- Relationships with neighbors were described as business relationships, family relationships, school relationships, or boundary related friendships due to properties being in close proximity. The speaker went into a little detail about each person the interviewer brought up. The interviewer was familiar with the families and region, and owned property in the local area. The interview was friendly and candid.

Spatial Orientation of Places

Most of the conversation described where things were located. While describing these spaces the speaker related who owned what properties (very generally when exchanges in property happened) and where these places were in relation to roads, stores, or mines and other properties.

Memories of Events

The speaker recalled stories that made an impression on him. He was very detailed when describing cattle drives, the mining of copper and chrome that occurred in and around his family's property, a meteorite that landed on his father's property, and school dances where he remembered having fun or some memorable occurrence or personality at the event.

Schooling

The topic that came up frequently was the schooling the speaker received and what that experience was like. While not stated at the beginning of the document, it is

evident that the researchers were trying to learn about schooling in the earlier years of the county. Many of the questions asked where the speaker went to school, who he remembered from school, his impression of his schooling, and who his teachers were. When he went off the topic of the question, he was gently returned to the topic.

Findings

Transcriptions

The interview transcriptions with these local residents was an interesting view of memory and what memories stay with people, or what they choose to share. There were no major insights into the family experience of the Joergers but they provided interesting information about an earlier time period in this region and recounted fond feelings for the Joerger family. The three transcriptions were performed by researchers from the Truckee Donner Historical Society interested in early schoolhouse life. After reading through the documents several categories of information emerged: All three speakers discussed schooling, transportation, family, neighbors, events that stood out to them, and the spatial orientation of places in relation to their story. Spatial orientation and feelings about people or events appeared to be the most vivid recollections for all three speakers.

Photos

The photos provided a face to the family and community being researched and also a sense of how people wanted to be remembered. The photos did not represent everyday life. They seem to be momentary windows into special events the participants wanted documented. While looking through the photos, impressions were written down

of how the photo was taken and where, if the image was for public or private use, who was in the photo, when it was taken, why it was taken, and anything strange that stood out within the photo. The majority of the photos were family portraits. there are some images of property, and a few images from news stories. More research into early photography would need to be conducted to understand some of the nuances observed, but the initial impression is that everyone did not have a camera, so the images we find from that time period are usually posed or staged, and for very specific reasons including special family, school, or news events, which warranted a photographer being hired to commemorate the moment. These images brought up more questions than answers. Did people of the period really dress so formally on a regular basis? What was the meaning of some people looking directly into the camera and some looking away? How did people decide what was important enough to commemorate? These are definitely interesting avenues to explore in future research, but the overall conclusion is that these pictures provide limited information. They are useful to envision what the family and past space looked like as well as to obtain a general impression of who was involved, how they wanted to be remembered, and what those individuals pictured may have valued.

The archival research for this project was not without obstacles but still provided useful information on the family and dairying practice. The documents found were not the primary source documents one would expect encounter. The research assumption was that there would be journals, letters, ledgers, and photos from the ranch itself. The primary sources found included grazing maps, one handwritten letter, photos, and some newspaper clippings that provided information on deaths, births, and weddings. The

transcriptions were from a later time period and were not Joerger family members but acquaintances who lived in the same area and had some interaction with the Joerger family. All three referred to the Joerger family at some point in their conversation. This indicates that the Martis Valley was a relatively small and close-knit community. The rest of the documents were secondary sources and included: two magazine articles that were looking back on dairying life in the region, undated typed family histories provided by descendants interested in their family history, and research performed by other professionals found in environmental documents.

Repositories for historical information collect and store any documented information they can obtain. The items used were the fruits of previous researchers interested in the subject. The available information on the Joerger family was primarily done by descendants or researchers doing genealogical research or work on a different topic. Many of the documents did not have detailed provenance. Timing appears to be important in what is saved. The transcriptions of interviews with local residents, were performed by a local historian affiliated with the Truckee Historic Society. He was able to obtain access to individuals with memories of early school house experiences in the area before they passed. Photos were collected by reporters or researchers from the surviving family for newspaper stories, magazines articles, or research. All of these documents ended up in the archives because someone cared enough to preserve what they could of the local history and donate it to these repositories. Some reasons for the limited availability of primary source documents regarding the Joergers include the possibility that family descendants might still retain the majority of the primary source

documentation if the information was preserved at all. Also, the lack of interest in early California ranching may limit research and preservation budgets. What is available is the product of someone's personal interest and these documents only provide a small window of insight into the Joerger family and early ranching life in California.

The period of significance for the Joerger Ranch site could not be narrowed down to a specific date based purely on the documentation but an estimate of when it was used can be gleaned from what was reported by family members and grazing documents. An interview with Cindy Tong, Joseph Joerger's great granddaughter, revealed that the ranch in Martis Valley was established in 1856 (Rucks 2011). Joseph was in partnership with some other ranchers and they would drive their herds up to the mountains in the summer months. However, another document typed by an unknown family member stated that Joseph and these ranchers would drive cattle up highway 50 to Silver Creek, today known as Wright's Lake, and they likely used that area from 1856 to 1875. This is much further southwest of Lake Tahoe and not near the Martis Valley. Joseph married Martha Ella Smith in 1876 and in a letter dated June 6, 1877, from her mother Martha A. Smith, she describes friends who might be near them in Lake Tahoe. A patent of the sale of land in Martis Valley is dated 1892. These public lands were often leased until the homesteader was able to purchase the property. Forest Service records show a large portion of the valley owned by Joseph Joerger but these maps were replacements dated 1900 and 1911 so they do not establish when he first leased the land in that area. It is possible that Joseph used a couple different pasturelands in different locations, but as evidenced by the letter from Martha Smith's mother they were on their way to the Tahoe

area as early as 1877. Archaeological testing is valuable in confirming if the period of significance goes back any earlier than the 1870s or later than the 1930s and whether or not there are multiple periods of significance.

After analyzing the documents uncovered at these historical societies and museums, it has been determined that they provide a limited view of what life was like during that time period but are still useful to the investigation. There are multiple documents that mention the Joerger family and their enterprises in not only the Martis Valley area, but also the El Dorado Hills area. However, there are no contemporary family or farm records to review and a very limited selection of associated photos and documents. Only one document, a handwritten letter, was dated earlier than 1900. The rest of the personal documents were from descendants of the original family members tracing their roots.

No firsthand accounts or news stories were available that chronicled how Native Americans and settlers interacted with each other in the Martis Valley. Anecdotal stories were found that referenced Native Americans working for settlers in the area, trading fish for milk, or harvesting grasshoppers (General Plan 1974, Lindström 2011, Rucks 2011, Shaw et al. 2012). The location of the Joerger summer ranch is the ancestral home of the Washoe people and determining the extent of their involvement or cooperation with these settlers is one avenue of research that could add to the understanding of the impact that settlement had on the Native people in the area.

Another line of inquiry for this project was to determine if the voices of women, children, disabled, or different ethnic groups was represented in any of the documents.

The single handwritten letter was the voice of a concerned mother, who was happy to hear from her daughter, a newlywed traveling to an area she was not familiar with. The impression of that letter was one of sadness over the death and illness of family and friends, and a love for her daughter, who she hoped would connect with others she thought might be near her in that new space. This brings to mind the uncertainty ever present in these frontier societies. Life was harsh and family members settling new areas would have been separated for long periods of time. The relatively slow and basic mail system was the primary way people knew if their loved ones were safe or, for the people on the frontier, to hear news of where they originally hailed from. Usually, that information would be several weeks old.

Despite the lack of extensive primary documents, the limited information available (pictures, stories passed down to descendants, the three transcriptions of people who lived in the early 1900s and attended school in the area, and information documented through others' research) can help depict what ranching life was probably like for the Joerger family between the late 1800s and early 1900s. Themes of community involvement, family support, and a desire to take risk resonated in these studied documents and these themes were important to success in this rugged environment. Like many frontier histories, long journeys, illness, fire, young deaths, and other hardships affected the Joergers and their community. They even persevered through winter-like weather during one eventful July.

Phase 3: Archaeological Testing

In order to conduct archaeological testing on Federal land it was necessary to secure an Archaeological Resources Protection Act (ARPA) permit. The permit request, research design and testing plan, was submitted to the Real Estate Office at the Corps', Sacramento District for approval May 1, 2018. The design was approved and the ARPA permit was received on June 25, 2018 (Appendix B).

On July 6th, 2018 the author of this thesis led a team consisting of Bryan Schear, camp chef; Corps Archaeologists S. Joe Griffin, Jack Pfertsh, Geneva Kraus, Jessica Neal, and Richard Perry; volunteer Russ Frink, and volunteers from Humboldt State University; Stanton Morse, Jenna Horvat, and Dianna Newberry to Truckee, California, to conduct testing at the Martis Valley Joerger Ranch. Testing was conducted on site on the 7th and 8th of July.

To begin the dig, the team established a permanent datum (UTM Zone 10N, 748745.1E/4355430.2N) at the center of the site (marked by a rebar with an orange cap) and three 1x1-meter (m) units. Artifact concentrations were measured and roped off with mason's string. Three auger tests were performed (Figure 19) (Table 6, 7, and 8) in one of the deep feature depressions to establish where to place Unit 4 (Table 15 and 16). The first auger did not contain artifacts while the second and third did, this indicated there might be intact archaeological deposits and a good place for a unit. Once the best location for Unit 4 was determined a 1x1-m unit was roped off. A team of one Corps Archaeologist and one volunteer was assigned to each unit and standardized forms were

provided to each group for recording information and observations regarding each layer.

A GPS point was recorded at each auger and at the southwest corner of each unit. The soil color was noted using a Munsell Soil Chart. Opening and closing photos of this operation were taken. Test Unit 5, a 1x1-meter surface count (Table 17 and 18), and Auger 4 and 5 (Table 9 and 10), were conducted on the second day. Each group was instructed to excavate their unit in uniform 10-cm layers and place the artifacts from each layer in brown paper bags to be analyzed, recorded, and photographed on site. These artifacts were placed back in the unit once it was ready to be backfilled.



19. Auger 1, 2, and 3, from top to bottom, facing north.

Findings

Table 6. Auger 1 (UTM Zone 10, 748749.7 E/4355435.7 N) (Figure 20)

Depth Below Ground Surface	Soil Description	Artifacts
0-20-cm	Grey SiSa, 20% pebbles, possible fill.	None
20-50-cm	Brown SiCilo, 20% pebbles, native soil	None



20. Auger 1, plain view, facing east.

Table 7. Auger 2 (UTM Zone 10, 748749.2 E/4355434.4 N) (Figure 21)

Depth Below Ground Surface	Soil Description	Artifacts	Classification
10-40cm	Grey brown SiSa, infrequent small pebbles.	None	N/A
40-50cm	Grey brown SiSa, infrequent small pebbles.	20-wood fragments	Structures
		1-cut nail shank	Natural resources tools & equipment
		1-wire nail shank slightly expanded	Natural resources tools & equipment
		1-small fragment of plain white earthenware	Natural resources tools & equipment



21. Auger 2, plain view, facing south.

Table 8. Auger 3 (UTM Zone 10, 748748.9 E/ 4355433.1 N) (Figure 22)

Depth	Soil Description	Artifacts	Classification
0-20cm	0-20: Grey brown SiSa, 10% pebbles.	1-Pointed tip of an iron pick axe, 10 to 12-cm bgs	Natural resources tools & equipment
		4-iron sheet metal fragments	Unclassifiable artifacts
		5-chunks of charcoal	Unclassifiable artifacts
20-40cm	Silty Clay	4-cut nail fragments (shanks and heads)	Natural resources tools & equipment
40-60cm	Heavy clay with dense brown rust oxidation	11-green glass bottle fragments	Packages and Containers
60-100cm	Heavy water laden clay with oxidation and decomposing wood	None	N/A



22. Auger 3, plain view, facing east.

Table 9. Auger 4 (UTM Zone 10, 748713.6 E/4355416.6 N) (Figure 23 and 24)

Depth	Soil Description	Artifacts	Classification
0 to 40-cm	Dark brown silty clay with some small rocks and pebbles	None	N/A
40 to 80-cm	Dark brown silty clay with oxidation	15-clear glass fragments	Unclassifiable artifacts
		20-cut nail fragments	Natural resources tools & equipment
80-120-cm	Dark brown to black wet clay with oxidation	4-Purple glass fragments	Unclassifiable artifacts
		10-Amber glass fragments	Unclassifiable artifacts
		Multiple sheet metal fragments	Unclassifiable artifacts
		9-cut nails (heads and shanks)	Natural resources tools & equipment
		7-Brick fragments	Structures
120-160-cm	Dark brown clay with oxidation	Multiple sheet metal fragments	Unclassifiable artifacts
		3-Amber glass fragments	Unclassifiable artifacts
		11-cut nail heads and shanks	Natural resources tools & equipment
		5-brick fragments	Structures
160-200-cm	Wet Dark brown to black clay	None	N/A



23. Auger 4, overview, facing west.



24. Auger 4, plain view, facing northwest.

Table 10. Auger 5 (UTM Zone 10, 748749.9 E/4355439.3 N) (Figure 25 and 26)

Depth	Soil Description	Artifacts	Classification
0-50cm	Light greyish brown that begins to turn dark brown between 40-50cm.	1-4 1/2" wire nail	Natural resources tools & equipment
		14-misc. metal fragments	Unclassifiable artifacts
		2-olive glass fragments	Unclassifiable artifacts
		1-aqua glass fragment	Unclassifiable artifacts
		1-clear glass fragment	Unclassifiable artifacts
		1-purple glass square panel bottle body fragment	Packages and containers
50-60cm	Darker brown organic layer with oxidation.	1-1 1/4" diameter 1/2" Lang center fire cartridge primer	Science and technology tools & equipment
		10- clear glass milk bottle fragments	Packages and containers
		1-2 1/4" diameter clear glass fragment, machine made with milk bottle finish	Packages and containers
		3-olive glass fragments	Unclassifiable artifacts
		18-misc. metal fragments	Unclassifiable artifacts
		1-white rubber	Unclassifiable artifacts
		1-wire nail head	Natural resources tools & equipment
60-86cm	Soil more compact, dark organic color with oxidation continues.	5-small fragments of clear glass	Unclassifiable artifacts
		1- piece of decayed wood	Structures
		1-small olive glass fragment	Unclassifiable artifacts
		1-small aqua glass fragment	Unclassifiable artifacts
		5-misc. fragments of metal	Unclassifiable artifacts

Depth	Soil Description	Artifacts	Classification
86-100cm	Soil change more clay and sand, some oxidation but much less than previous layer.	None	N/A



25. Auger 5, overview, facing west downhill.



26. Auger 5, plain view, facing southwest.

Test Unit 1 (UTM Zone 10, 748713.8 E/4355384.1 N) (Figure 27 and 28)

Jessica Neal, M.A., RPA, and volunteer Russell Frink were assigned to Test Unit 1. The soil in level one (0 to 20-cm bgs) and level two (20 to 30-cm bgs) was dark and greyish brown (10YR 4/2). Large watermelon sized rocks and brick fragments covered the surface and were found throughout level one. Two fist-sized bricks were also removed from the first level. Level two contained 40% cobbles fist-sized or smaller. Soil for both levels was screened through a 1/4" screen. The team recovered a total of 19 artifacts from Test Unit 1; nine from level one; and ten from level two. No artifacts were uncovered in the bottom five centimeters of level two and the team leader decided to close the unit. The recovered artifacts were classified into the Natural Resources, Natural Resources Tools and Equipment, Packages and Containers, Structures, and Unclassifiable Artifacts categories (Table 11).

Table 11. Artifacts Recovered from Test Unit 1 by Functional Category.

Category	Level 1	Level 2
Ecofacts	1	
Natural Resources Tools and Equipment		3
Packages and Containers	4	
Structures	3	7
Unclassifiable Artifacts	1	

 Ecofacts. The team recovered one ecofact or biofact, this is organic material, for example; bone, plant material, or charcoal, found at an archaeological site that carries significance and is associated with the site or feature being studied, but has not been modified by humans. In this case, a peach pit, was recovered from the first level of Test Unit 1. Peaches have been in California since the 1700s and were a popular food for

fresh consumption and canning during the Gold Rush. Canned/preserved peaches are still very popular today (Lazicki, P., Geisseler, D., & Horwath, W., 2015).

Natural Resources Tools and Equipment. The team recovered three plain white earthenware fragments at the second level of test unit 1. These were classified as Natural Resources Tools and Equipment assigned to the Food and Food Service category. Earthenware or hotel ware is one of the most common ceramics found at historic archaeological sites. These fragments had no markings and are undiagnostic.

Packages and Containers. All four items in the Packages and Containers category were recovered from the first level and further classified as Product Packages. All four are clear glass partial fragments from two or three separate bottles. Two of the fragments are from a square base of a bottle with “cl” and “use” embossed on the base, one is a machine-made threaded neck and partial shoulder of a bottle, and the third is a bottle shoulder fragment. None of these fragments could be tied to a certain type of bottle, company, or time period. Clear glass was widely used after 1875 (Fike 1987).

Structures. The team found three fragments of clear window glass with no tint from level one and seven fragments from level two. The team classified them as a Building Component likely from the window glass of a structure.

Unclassifiable Artifacts. One small fragment of green carnival glass was recovered from the first level and classified as an Unclassifiable Artifact/Artifact Remnant. Due to the size of the fragment its use could not be determined. Carnival glass was first produced circa 1908 in the United States as a cheaper alternative to expensive iridescent blown glass. It was very popular in the 1920s and is still made today (Witten

2004). Many items both utilitarian and ornamental were made with the carnival glass finish and it came in a wide variety of colors (Witten 2004).



27. Test Unit 1 opening photo, plain view, facing north.



28. Test Unit 1 closing photo, plain view, facing North West.

Test Unit 2 (UTM Zone 10, 748731.7 E/ 4355428.9 N) (Figure 29 and 30)

Geneva Kraus, M.A., RPA, and volunteer Stanton Morse were assigned to Test Unit 2 which they excavated in 10-cm levels. The soil was a uniform silty loam with small pebbles and a light brownish grey (10YR 6/2) color throughout each level, but the clay content slightly increased at around 17-cm-bgs. The soil for all levels was screened through a 1/4" screen. The team recovered a total of 72 artifacts from Test Unit 2 and classified them functionally into four categories: Natural Resources Tools and Equipment, Packages and Containers, Personal Artifacts, and Unclassifiable Artifacts (Table 12). Only one artifact was recovered from the third level and it likely fell into the unit from the surface or sidewall so the team leader decided to close the unit at 30-cm-bgs.

Table 12. Artifacts Recovered from Test Unit 2 by Functional Category.

Category	Surface	Level 1	Level 2	Level 3
Natural Resources Tools & Equipment	19	12	26	1
Packages and Containers	3			
Personal Artifacts			1	
Unclassifiable Artifacts	1		9	

Natural Resources Tools and Equipment. The majority of the artifacts recovered from the unit were classified as Natural Resources Tools and Equipment/Woodworking. The team found wire and cut nails in a variety of sizes at the surface and within levels one and two of this unit (Table 13). One wood screw was also recovered from level two. One fragment of undiagnostic plain earthenware, classified further into a Food/Food

Service item, was recovered from the bottom of the unit but the team believes it fell in from the surface or a side wall.

Table 13. List of Woodworking Artifacts in Test Unit 2.

Depth	Artifact	Count	Pennyweight/Length
Surface	Wire nail	4	2 5/8"
	Wire nail	1	Unknown
	Cut nail	1	20d
	Cut nail	1	30d
	Cut nail	1	40d
	Cut nail fragments (shanks & heads)	11	Unknown
0 to 10-cm	Cut nail	1	40d
	Wire nail	1	4 1/2"
	Wire nail fragment (shank & head)	1	Unknown
	Cut nail fragments (shanks & heads)	9	Unknown
10 to 20-cm	Wood screw	1	2 1/2", 7/16"-head diameter
	Wire nails	3	1 1/2"
	Wire nails	2	3"
	Wire nails	2	2 1/2"
	Cut nail fragments (shanks)	9	Unknown
	Cut nail fragments (shanks & heads)	9	Unknown
20 to 30-cm	None		

Packages and Containers. Three items classified as Packages and Containers were recovered from the surface of the unit. One olive vessel fragment, one purple glass vessel fragment and, one item, classified further as Product Package/Medicinal. It is the same fragment of a milk glass cosmetic jar, pictured above in Figure 15, observed during the 2017 survey. It had several letters embossed on the body and was identified as most likely containing a resinol cream made by the Resinol Chemical Company in Baltimore

Maryland between 1897-1948. The company made a variety of resinol products used generally for skin disease, inflammation, burns, and irritation (Maryland Historical Society 1999).

Personal Artifacts. One Personal Artifact, a textured rubber gum sole fragment from the sole of an irrigation boot with rust colored binding straps was recovered from level two. The team classified it as Clothing/Footwear and undiagnostic. This style of boot was, and still is, worn in an agricultural setting because it protects the feet from muddy or wet conditions.

Unclassifiable Artifacts. Unclassifiable Artifacts recovered from the unit included one small-gauge length of wire and nine iron fragments. These items were further classified as Artifact Remnants/Unknown use. The wire is possibly bailing wire, and was found at the surface. The unidentifiable iron fragments were found in the second level.



29. Test Unit 2 opening photo, plain view, facing south.



30. Test Unit 2 closing photo, plain view, facing north.

Test Unit 3 (UTM Zone 10, 748766.7 E/ 4355469.1 N) (Figure 31 and 33)

Richard Perry, retired Corps Archaeologist, and volunteers Jenna Hovart and Dianna Newberry were assigned to Test Unit 3 which they excavated in 10-cm levels. The silty and slightly rocky soil in Test Unit 3 was a uniform greyish brown (10YR 5/2) color throughout each level but proved harder and more compact at the second level. Soil for all levels was screened through a 1/4" screen. The artifact density at the surface of the unit was low but did include some glass fragments. The surface artifacts are included within the level one count. The team recovered sixty-one artifacts from Test Unit 3. In the chart below (Table 14), they are functionally separated into five categories: Natural Resources Tools and Equipment, Personal Artifacts, Science and Technology Tools and Equipment, Structures, and Unclassifiable Artifacts. The team lead closed this unit near the end of the second day. The floor of the unit was not reached due to hard compact soil that took more time than anticipated to screen.

Table 14. Artifacts Recovered from Test Unit 3.

Category	Level 1 (0 to 10-cm)	Level 2 (10 to 20-cm)
Natural Resources Tools & Equipment	15	2
Personal Artifacts	3	
Science and Technology Tools & Equipment	6	2
Structures	27	
Unclassifiable Artifacts	5	1

Natural Resources Tools and Equipment. Items further classified as food/food processing included: eight plain white earthenware fragments from level one, one plain white earthenware fragment from level two, and one 5 1/8" long hooked dairy scale

counter weight (1 to 3 lbs.) (Figure 32) recovered from level one. Woodworking items included three 3 1/2" wire nails, one wire nail head, and one 1 7/8" long wire nail from level one. The team recovered two round iron fragments, likely wire nail shanks, from level two. One 3/8" diameter rivet burr, that appears to be a washer from an animal harness, was recovered from level one and is classified further under animal husbandry.

Personal Artifacts. Two pieces of an iron backed button (5/8" dia.) found in level one is classified under clothing/fastener and one 1/2" shoe or boot sole nail was classified as clothing/footwear.

Science and Technology Tools and Equipment. Multiple cartridges classified further as Armament/Ammunition were recovered from the unit. All but one, a mushroomed lead bullet with no identifying marks, was recovered from the first level and included one 8mm head with no head stamp, four .22 caliber rim fire cartridges, one with a "u" embossed on the head. The other three were completely crushed. The team also recovered two .38 caliber cartridges with the head stamp (REM-UMC/38 S&W SPL). Also found was one 1/4" diameter rod from a D-cell battery in the second level and classified further in the Electrical and Magnetic category.

Structures. The team recovered twenty-seven window glass fragments with varying degrees of aqua and green tint in the first level and classified further as a Building Component.

Unclassifiable Artifacts. Unclassifiable artifacts were further classified as Function Unknown or Artifact Remnants. Those in the Function Unknown category included one 2 3/8" long by 1/2" wide broken beveled iron stock that appears chiseled at

the end, one brass threaded nipple $\frac{3}{8}$ " long and $\frac{1}{4}$ " wide, one rectangular brass piece $\frac{5}{8}$ " by $\frac{3}{8}$ ", and one $\frac{1}{2}$ " diameter brass chain link bent open. Those classified as Artifact Remnants included one broken shallow u-shaped piece of cast iron that is $1\frac{7}{8}$ " long and $\frac{5}{8}$ " wide, and one small purple glass fragment.



31. Test Unit 3 opening photo, plain view, facing north.



32. Test Unit 3-level 1, plain view, dairy scale counter weight.



33. Test Unit 3 closing photo, plain view, facing north.

Test Unit 4 (Zone 10, 748748.7 E/ 4355434.3 N) (Figure 34, 35, 40)

S. Joe Griffin, M.A., RPA, and volunteer Dianna Newberry, M.A., excavated Test Unit 4 in 10-cm levels. The soil at level 1 (0 to 10-cm-bgs) was a grey (10YR 6/1) sandy silt with moderate pebble inclusions. The soil appeared to be disturbed and overburdened by a deeper feature to the south. The artifact density was low with only a few small artifacts and burned wood. The soil at level 2 (10 to 20-cm-bgs) remained the same color but more compact and blockier, especially along the north edge where burned wood began to emerge at 14-cm-bgs. This was likely structural debris. The grey silty sand gave way to a brown silty loam in level 3 (20 to 30-cm-bgs) (Figure 36 and 37). The artifact density at this level increased and the preponderance of artifacts, including a porcelain doll leg (Figure 39) and burned wood, emerged from the brown sediment. This was again, likely a layer of building debris. The soil at level 4 (30 to 40-cm-bgs) remained a brown silty loam with very few rocks or pebbles. The artifact density remained moderate with frequent wood pieces and charcoal (Figure 38). The team excavated Test Unit 4 for two days and closed it at level 4 due to time constraints. The floor of the feature was not reached. Figure 41 shows the side wall profile, facing east. Soil for all levels was screened through a 1/4" screen. Over three-hundred and fifteen artifacts were recovered from Test Unit 4 and classified into seven general categories: Ecofacts, Natural Resources Tools & Equipment, Packages and Containers, Personal Artifacts, Recreational Artifacts, Structures, and Unclassifiable Artifacts (Table 15).



34. Test Unit 4, opening photo, facing north.

Table 15. Artifacts Recovered from Test Unit 4.

Category	Level 1	Level 2	Level 3	Level 4
Ecofacts	13	11		3
Natural Resources Tools & Equipment	2	6	6	22
Packages & Containers		3	7	9
Personal Artifacts			2	
Recreational Artifacts			1	
Structures	9	34	10	>152
Unclassifiable Artifacts	2	12	7	4

Ecofacts. Several items classified as Ecofacts were recovered from test unit 4.

Level one contained thirteen small chunks of charcoal, level two had eleven chunks of charcoal, and level four contained three small pieces of unidentified faunal remains.

Their use or purpose have not been determined at this time but they signaled a marked change within the unit.

Natural Resources Tools and Equipment. A majority of the artifacts recovered from Test Unit 4 were classified further under Woodworking. The table below lists the type of item recovered, size (if known), and at what depth they were found (Table 16).

Table 16. Woodworking Artifacts Recovered from Test Unit 4.

Depth	Artifact	Count	Pennyweight/Length
0 to 10-cm	Cut nail	1	12d
	Cut nail shank	1	Unknown
10 to 20-cm	Cut nail	2	Unknown
	Spike	1	Large
	Cut nail shank	4	Unknown
20 to 30-cm	Cut nail	1	3"
	Cut nail	1	3 3/4"
	Cut nail shank	4	Unknown
30 to 40-cm	Cut nail	2	40d
	Cut nail	1	30d
	Wire nail	1	4 1/2"
	Wire nail	1	2 1/4"
	Cut nail shank	6	Unknown
	Cut nail shank and head fragments	3	Unknown
	Spike with beveled tip and mushroomed 1" diameter head	1	7 1/4" long /1/2" diameter

Other artifacts recovered and classified as Natural Resources Tools and Equipment were further classified as Food/Food Service. These included three pieces of a

key-wind opener (handle and two unknown pieces) and five plain white earthen ware fragments (three plate rims and one unknown fragment). The team determined these to be undiagnostic.

Packages and Containers. Two undiagnostic sanitary can rim fragments were recovered from level two. Two olive bottle fragments, five iron sheet metal fragments of a can, and two additional rim fragments from a sanitary can were found at level three. None of these items are diagnostic.

Personal Artifacts. The team recovered two personal artifacts further classified as Clothing/Fastener and Clothing/Outerwear from level three. The fastener is a spring-end and tine of a brass safety pin, and the outerwear is one piece of thin leather with stitching holes from a glove. These items are undiagnostic.

Recreational Artifacts. The team recovered one porcelain doll leg, classified further as a Toy from level three. The doll leg displayed stitching hone and the number “23” stamped on it. It was 2 1/8” long with a 3/4” upper leg diameter (Figure 38). The leg could not be associated with any specific doll and the “23” stands for the height of the assembled doll, therefore it could not be dated. However, the presence of the doll and other artifacts related to children does say something about childhood while at this seasonal ranch. It was not all work and no play.

Structures. The items recovered from the unit under the Structures category were further classified as Building Components. As the team removed each level, they found more wood and window glass fragments. They found nine fragments of wood in the first level, thirty-four fragments in the second level (one with a large knot burned on the

surface only), ten in the third level, and then more than one-hundred-and fifty in level 4. They also recovered two aqua green tinted pieces of window glass in level 4. These items strongly indicated the remains of a structure. Time constraints did not allow for expansion within the unit and kept the team from reaching the floor of the unit.

Unclassifiable Artifacts. Unclassifiable Artifacts found within the unit were further classified as Artifact Remnants or Function Unknown. One piece of amber glass was found in level one. Level two revealed twelve sheet metal fragments that were badly corroded but possibly pieces of can fragments; one amber bottle body fragment, and one porcelain fragment that most likely belonged to another portion of the doll. The team also recovered one 5/8" diameter by 1" long, section of rubber hose, one unidentified piece of iron, three clear glass fragments (one stipple base, one square panel, and one unidentified) from level three. Level four included one olive glass fragment, one aqua bottle body fragment, one green glass bottle fragment, one clear glass bottle fragment, six sheet metal fragments (one body and one flange), and two clear glass fragments melted. The presence of melted glass, charcoal, and the burnt suggested that a structure fire occurred at some point. This fire would have reached at least 2600 to 2800 degrees Fahrenheit, a temperature hot enough to melt glass.



35. Test Unit 4 opening photo, facing north.



36. Test Unit 4, soil color change north east corner, facing north east.



37. Test Unit 4, soil color change, plain view, facing north.



38. Test Unit 4, wooden fragments, facing north.



39. Test Unit 4, Porcelain doll leg.



40. Test Unit 4 closing photo, facing north.



41. Test Unit 4, side wall profile, facing east.

Test Unit 5 (Zone 10, 748727.0 E/ 4355430.5 N) (Figure 42 and 43).

There was insufficient time on day two to fully excavate the fifth test unit. Instead, Test Unit 5 is a 1x1-meter count of surface level artifacts within one of the artifact concentration areas identified during the pedestrian survey portion of the project. Geneva Kraus and volunteer Stanton Morse were assigned to this unit after closing test unit 2 on the final day in the field. The team recovered over 35 artifacts from the surface of this 1 x1-meter unit. They were classified into four general categories including: Natural Resources Tools and Equipment, Packages and Containers, Science and Technology, and Unclassifiable Artifacts (Table 17).

Table 17. Artifacts Recovered from Test Unit 5.

Category	Surface Count
Natural Resources Tools and Equipment	28
Packages and Containers	2
Science and Technology Tools and Equipment	1
Unclassifiable Artifacts	>45

Natural Resources Tools and Equipment. The team classified further as Woodworking Items nineteen cut nails, seven wire nails in various sizes, and one fence staple; all present at the surface (Table 18). A graphic representation is shown in (Figure 44). Also present at the surface and further classified as an Animal Husbandry Tool was a reusable steel syringe needle tip. The rim at the base of the needle had the letters “B-D” engraved on the side. It was most likely used for administering medicine to livestock. The engraving “B-D” stands for Becton and Dickson Company and would have been in use post- 1925 when they introduced the BD Yale Luer-Lok which provided a simple and

secure way to remove and attach the needle to the syringe. Also found on the surface was one heavily corroded milk canister rim with a 6" diameter top and an 8 1/2" diameter body. (Figure 45). Information on the history of milk cans is scarce but some sources claim they were widely used to transport milk and make butter throughout the 19th century until more efficient and sanitary means of storage and transportation were developed (Feiereisel 2017).

Table 18. List of Woodworking Artifacts in Test Unit 5.

Depth	Artifact	Count	Pennyweight/Length
Surface	Cut Nail	2	4"
	Cut Nail	2	3 1/2"
	Cut Nail	7	3"
	Cut Nail	1	2 1/2"
	Cut Nail	1	1 3/4"
	Cut Nail	1	1 1/2"
	Cut Nail	1	1"
	Cut Nail Shafts	3	Unknown
	Wire	1	3 1/4", 1/4" dia.
	Wire	2	3 1/2", 1/4" dia.
	Wire	2	3 1/4", 1/4" dia.
	Wire	2	2", 3/8" dia.
	Fence Staple	1	N/A

Packages and Containers. The two clear glass fragments on the surface of Test Unit 5 appeared to be bottle or jar lips and were classified further as Product Packages. Clear glass was used generally after 1875 for many types of containers.

Science and Technology Tools and Equipment. The bottom portion of a split nail knob with the nail still in it was further classified as Electric (Figure 46). As noted in the survey portion of this document this style was in use from 1884 to the 1930s.

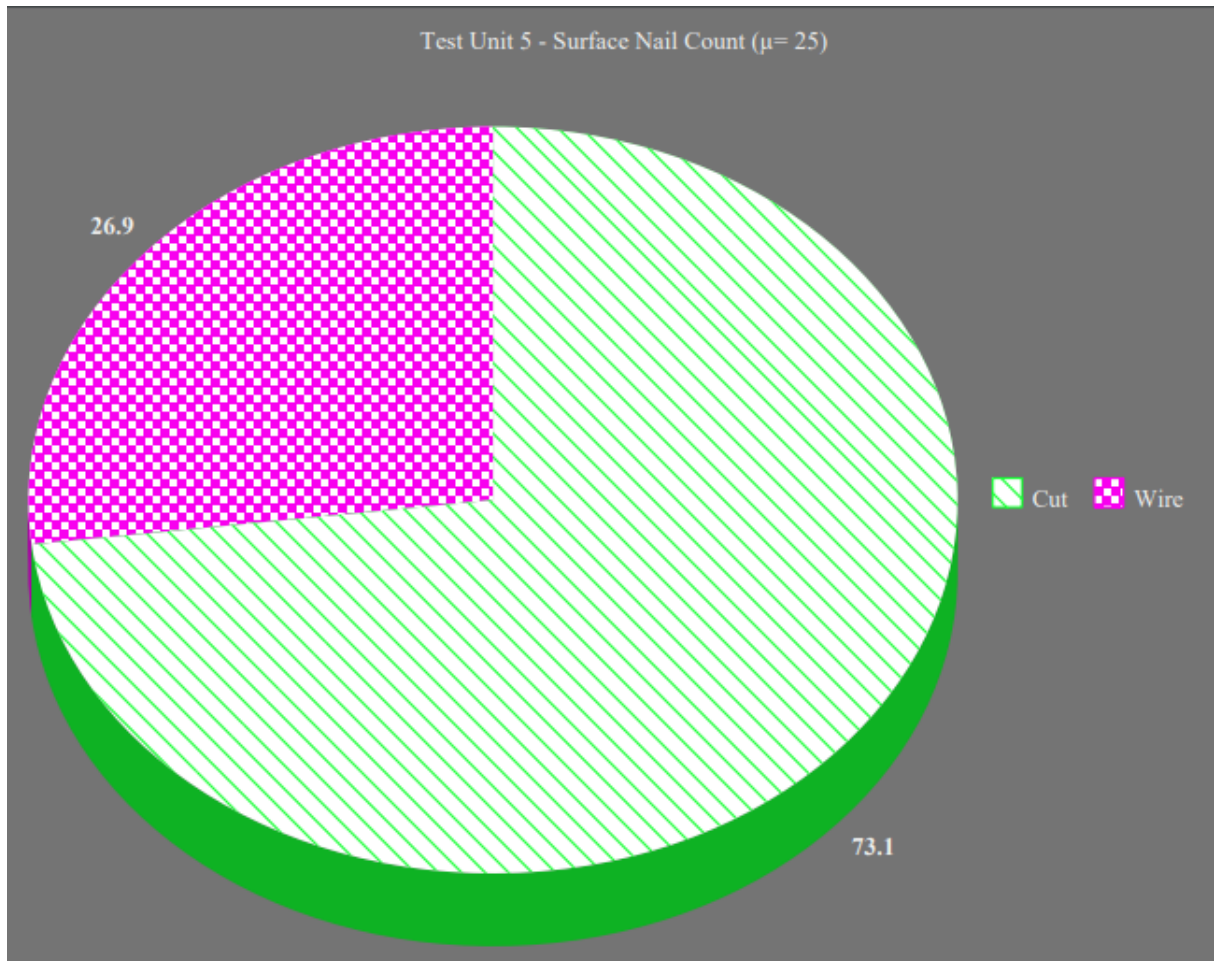
Unclassifiable Artifacts. Several items observed on the surface of the site were classified as Unclassifiable Artifacts. Two corroded metal lips from a bucket, one brown glass fragment, and miscellaneous corroded metal fragments were further classified as Artifact Remnants. The team classified multiple wire fragments, chunks of red and orange mottled chert, and one white glazed ceramic base fragment as Function Unknown.



42. Test unit 5 (surface count), overview facing west.



43. Test unit 5 (surface count), plain view, facing west.



44. Test unit 5 Graphic, percentage of surface nails by type.



45. Test unit 5 (surface count), plain view, milk jug upper.



46. Test unit 5 (surface count), plain view, lower nail knob with nail.

CHAPTER 5: EVALUATION

The goal of this project was to provide a thorough evaluation of the Old Joerger Ranch by determining its historical significance through research and archaeological testing, and make a recommendation of eligibility for the National Register of Historic Places to the property's managing agency, the Army Corps of Engineers, Sacramento District.

Cultural Resources are eligible for the NRHP if they have integrity and significance as defined in National Register Bulletin 15 which includes the criteria for evaluation. The four criteria listed below are the characteristics used to determine if a property is eligible for the NRHP. A property will be considered significant if it displays one or more of the following characteristics:

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

In addition to possessing significance, a property must also retain integrity, or its ability to convey that significance. According to National Register Bulletin 15, “historic properties either retain their integrity or they do not...and they will often possess several, and usually most of the aspects”. Once a property’s significance has been established the issue of integrity is assessed. The seven aspects of integrity include:

1. Location: The place where the historic property was constructed or the place where a historic event occurred.
2. Design: the combination of elements that create, form, plan, space, structure, and style of a property.
3. Setting: the physical environment of the historic property, natural or manmade, that include elements of topography, vegetation, manmade features, and the relationship between that property and its physical environment including buildings, other features, or open space.
4. Materials: the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. Feeling: a property’s expression of the aesthetic or historic sense of a particular period of time.
7. Association: the direct link between an important historic event or person and a historic property.

Conclusion

Historical investigation and test excavations at the Martis Valley Joerger Ranch have revealed an intact archaeological site with a rich history important to the development of the dairy industry in Northern California shortly after the Gold Rush. Joseph Joerger's ability to bring insight into how to manage dairy cattle in a fluctuating, unfamiliar, and sometimes harsh climate inspired others to follow suit and together they became powerful advocates for their industry in the new communities developing around them.

Historical and archaeological evidence supports seasonal use of the site by one family with a period of significance from at least 1876 to 1930. This site retains its integrity of location, design, setting, materials, feeling and association, but due to its lack of intact structures it does not maintain integrity of workmanship. The continued preservation of the Martis Valley's pristine open spaces allows one to picture what it might have been like to live and work in this space. This site appears to be eligible under Criteria A for its association with and contribution to a broad pattern of settlement and agricultural development within the state of California that led to it being the most important and diverse agricultural economy in the United States. It appears to be eligible under Criteria B for its association with Mr. Joseph Joerger who is locally significant to the development of the dairy economy in the Sacramento and Truckee, California regions. The site appears to be eligible under Criteria D for the site's intact archaeological deposits which could yield important information on agricultural life

shortly after the Gold Rush. The site does not appear to be eligible under Criteria C in that it does not embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction.

Recommendations

The variety of artifacts found on site, the presence of intact archaeological deposits, and the continued preservation of the surrounding landscape leaves room for many avenues of future research. Geoarchaeological explorations, landscape archaeological analysis incorporating soils analysis, and household studies revolving around consumption, economy, use of space, medicinal use, or family life, are just a few of the research topics that could be pursued if in the future there is a need or desire to embark on a full excavation of the property. A list of appropriate research questions that can be applied to this site is provided in Appendix A of this document.

If future work is planned at the Army Corps' Martis Dam Lake and Park that might significantly impact the site, and if the site cannot be avoided or preserved in place, a recommendation of Adverse Effect would be appropriate. A full data recovery effort that incorporates creative mitigation would be necessary to not only obtain as much information as possible about life ways at this remote location but would incorporate a way to share that information with the wider public. A data recovery plan is provided in Appendix E.

Once data recovery at the site is complete, efforts should be made to inform the public about the results of the data recovery project. An example of creative mitigation, that would allow the greatest number of people to enjoy not only what has been discovered at the site but within the valley, would incorporate modern technology. A webpage could be created that has information about the park and the amenities it offers, while also including a section for the history and archaeology of the valley. Electronically accessible 3-Dimensional images of artifacts, historical and archaeological interpretations of what life was like, recreations of how the valley has changed throughout time would reach a wider group of people than visitors to the park alone. This site could also be updated as new sites are evaluated, and possibly increase interest and foot traffic to the park's recreational spaces.

Old Joerger Ranch has the potential to yield more information about a property type that is slowly disappearing throughout the nation due to expansion in development and a collective disinterest in our early agricultural beginnings. The Corps, with its mission of stewardship over this valley, is in a unique position to create new interest in this region's long and rich history.

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APPENDIX A

Period of Significance: A period of significance is defined by the National Register as “the time range during which the property was occupied or used and for which the property is likely to yield important information if evaluated under Criterion D” (Little et al 2000 p. 34).

Research Questions:

- When was the property occupied or used?
- How many occupations of the site are there?
- If there are multiple occupations, do they overlap?
- Are there multiple periods of significance?

Data Requirements:

- Intact archaeological deposits
- Artifacts that can be used to date the site
- Artifacts associated with the period of significance
- Distinguishable transition from one use to another

Integrity: In order to be eligible for the National Register a property must retain integrity and be able to convey its historical importance. An eligible property must possess integrity of the following elements (Little et al 2000; CalTrans 2007):

- Location, i.e. the place where the historic property was constructed or the place where the historic event occurred;

- Design; the combination of elements that create the form, plan, space, structure, and style of a property;
- Setting; the physical environment of a historic property which can include elements like topographic features, open space, view shed, landscape, vegetation, and artificial features;
- Materials; the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- Workmanship; the physical evidence of the labor and skill of a particular culture or people during any given period in history;
- Feeling; a property's expression of the aesthetic or historic sense of a particular period of time and;
- Association; the direct link between an important historic event or person and a historic property.

Integrity considerations:

- Does this property contain archaeological deposits that are relatively intact and complete?
- What is the level of preservation or quality of information contained within the site?
- Do the features within the site have "focus", represent clearly a particular phenomenon?
- Are the archaeological features and other deposits temporally diagnostic, spatially discrete, and functionally defined?

- Can you interpret what activities took place at the property and when they occurred?
- How did the historic property become an archaeological site? Were the cultural and natural site formation processes catastrophic, deliberate, or gradual? How did these changes impact the properties archaeological deposits?
- What is the quality of the documentary record associated with the occupation and subsequent uses of the property? Are the archaeological deposits assignable to a particular individual, family, or group activity?

(Deetz 1977, Little et al 2000, Wilson 1990)

Data Requirements:

- Archival and historical research on the site location and time period with enough information to be able to interpret the data gathered on site and discuss who occupied it and when.
- Enough stratified, intact, datable archaeological deposits that can convey what was going on and when.

Site Structure and Land Use Patterns

Research Questions:

- How was the agricultural property organized?
- To what extent is the layout attributable to variations in household composition, ethnicity, duration of occupation, environmental constraints, or other factors?
- Does the orientation, layout, or composition of structures on the property reflect changes in household composition over time?

- What do the structures, features, and layout of the property reveal about the philosophy and approaches used to carry out agriculture?
- Is there evidence of a change in approach to site layout over time, if so, why the change?
- Are there indications of specialized work areas or gendered uses of space, and what does that reveal about the organization of work and how it may have changed over time?
- Do land use patterns reflect traditional ethnic behavior?
- Is there a high degree of specialization or more generalized use of the property and activity areas?
- Was production diversified or specialized, and did the focus change over time?
- What factors account for changes in production focus?
- Is there evidence that the plot size changed over time and how does that relate to broader historical trends of land ownership?
- Is there evidence that changing plot size influenced the degree of family participation or adoption of scientific farming practices?
- To what extent did geomorphological conditions influence the success or failure of a settlement?
- Did distance to major transportation routes influence the long-term success of the farmstead?
- Does the layout and organization of the property reveal information about the way the owner or tenant related to neighbors?

Data Requirements:

- Evidence of environmental adaptations
- Features and deposits with identifiable functions and periods of use
- Undisturbed land where archaeological deposits may have survived.
- Structural remains with evidence of function, separation, and use of space.
- Trash pits or a privy with depositional integrity and a variety of identifiable artifacts that can be associated to different time periods.
- Features and artifacts that can help us understand spatial organization, activity areas, or landscaping decisions of the occupants. (CalTrans 2007, p.185)

Economic Strategies

Research Questions:

- Is there evidence for a change in economic use?
- Does this site contain products of an industrialized world?
- Is there evidence of mass marketing and urbanization in household goods?
- Is there evidence of trade between the Native Americans and the household?
- To what degree did site occupants depend on products of an industrialized world for their material needs?
- Is there a difference in goods in different spaces?
- Is there evidence of goods from other countries?

- Is there evidence of household adaptations to changing economic circumstances brought about by changing market conditions, production output, and periodic environmental disasters such as drought, flood, and pestilence?
- Is there evidence for what circumstances manufactured goods are favored over home-made products?
- Is there evidence of recycling and repair, and did that change over time?
- Are there changes in the archaeological record that indicate more home production?
- Were the occupants of the site full-time ranchers or is there evidence of different economic strategies?
- Were the occupants of the site conservative and frugal in their choices and is that visible in the archaeological record?

Data Requirements:

- Material remains that reflect self-sufficiency which can include: canning jars, homemade items, items that show alteration, repair, and reuse.
- Evidence of the presence of a smokehouse or cellar for processing and storing food.
- Proportion of items that reflect home manufacture compared to commercial manufacture.
- Decorative vs. functional items
- Faunal remains that reflect wild vs domestic species and commercial vs home butchered.
- Evidence of a garden

- Evidence of items common to Native American groups in the area or items that reflect ethnic heritage
- Intact archeological deposits with a variety of artifacts that reflect sufficient temporal and spatial integrity.

Consumer Behavior and Technology

Research Questions:

- Are undisturbed historic deposits or features present that contain evidence of consumer practices, economic decisions, or changing technology?
- Is there evidence present of consumer behavior for the household or the commercial business or both?
- Is there evidence that the consumer products used at the site are from local sources or outside of the area?
- Is there evidence of handmade materials, mass production, or other types of manufacturing processes?
- Is there evidence of consumer practices changing over time?
- Does this resource add to our knowledge of adaptive behavior in rural settings in this region associated with the acquisition and consumption of foodstuffs or the organization and use of space?
- Does this resource add to our knowledge of the availability of various classes of consumer goods at a specific place and point in time?
- Can the evidence at the site tell us what role transportation played in the growth, changes to, and range of activities engaged in at the site?

- Can the evidence at the site tell us the level of technology being applied to various activities represented at the site?
- Is there evidence that ethnic or social situations play a role in the level of technology in use?
- Is there evidence that the technology in use is being used in an adaptive or innovative manner?

Data Requirements:

- Similar deposits as the previous categories.
- Items with identifiable manufacturing labels, makers marks, or styles that reflect consumer habits.
- An understanding of the cost and origin of products would also be necessary to determine what that reflects about consumer behavior.
- Artifacts that have been altered or are in a space that you wouldn't expect might reflect adaptive and innovative use.
- Artifacts that reflect a technological change over time in tool, storage, or transportation technologies.

Ethnicity and Social Status

Research Questions:

- Are undisturbed historic deposits/features present that contain evidence of the consumer practices of a specific social, ethnic, occupational, or economic group?
- Is there evidence of poverty, status, or wealth in the deposit?

- Is it possible to link particular types of artifacts or ecofacts (e.g. faunal remains) to specific social or ethnic groups?
- Are ethnically distinct ranching practices or technological innovations present?
- Is there evidence of trade with, or employment of, local Native American populations?
- Is there evidence of the socioeconomic level of the individuals engaged in particular activities at the site?
- Is there evidence of how various ethnic groups fit into the community socially and economically?
- Can ethnic affinity be tied to diet at the site?

Data Requirements:

- Faunal or material remains that reflect traditional dietary practices of an ethnic or social group, traditional farming practices of a particular ethnic or social group, or traditional home practices of an ethnic or social group.

Family Life

Research Questions:

- Is there evidence of family related activity at the site?
- Is there evidence of ritual behavior?
- Is there evidence of the family in all activities at the site?
- Is there evidence of gendered spaces?
- Is there a separation of activities by gender within the site and within the household?

- Can difference in diet be correlated to different activities at the site beyond that of personal preference, ethnic background, and social status?
- Are there activities going on at the site that are not reported or are under reported in the historical record?

Data Requirements:

- Spaces that include artifacts representative of different genders and ages.
- Space with artifacts that can be tied to ritual behavior; religious paraphernalia, statues, burial space.
- Evidence of modification of artifacts.
- Drug or alcohol paraphernalia in specific spaces.
- Artifacts or food remains that reflect an ethnic preference, preparation technique, or heritage.

Health

Research Questions:

- Is there evidence of recreational activities at the site?
- What is the diet represented at the site?
- Can diet provide insight into the health of the community?
- Can diet be used as an indicator of socioeconomic status at the site?
- What vices are represented at the site?
- If vices are present, how are they represented in terms of socioeconomic status or ethnic background?

- Is there evidence of healthcare?
- Is the healthcare at the site related to the people or animals?

Data Requirements:

- Containers for drugs, medicine, or alcohol with makers marks.
- Different medicinal paraphernalia in a space for animals or humans or the absence of these artifacts in certain spaces.
- Toys and game pieces in various spaces throughout the ranch.
- Clothing or shoes of various sizes
- Food remains (faunal, botanical) and storage containers (cans, bottles, and dishware) that indicate type of diet maintained over the years.
- Changes in the artifact assemblage that reflects a change in diet, healthcare, drug use, or play.

APPENDIX B

DEPARTMENT OF THE ARMY ARCHAEOLOGICAL RESOURCES PROTECTION ACT PERMIT	
NAME OF PROJECT OR INSTALLATION: <u>Martis Creek Lake & Dam Project</u>	<div style="text-align: right; font-size: small;"> <i>(Please use this number when referring to this permit.)</i> NO. DACW05-4-18-519 </div>
To conduct work upon public lands owned or controlled by the Department of the Army under the Archaeological Resources Protection Act (93 Stat. 721, 16 U.S.C. 470aa-11) approved October 31, 1979 and the regulations thereunder (32 CFR 229).	
1. PERMIT ISSUED TO: Hope Schear	DATE: 25 June 2018
2. NAME, ADDRESS AND OFFICIAL STATUS OF PERSON: a. In general charge: Jack Pfertsh, M.A., 1607 10th Street, Sacramento, CA 95814 b. In actual direct charge: Hope Schear, 6701 50th Street, Sacramento, CA 95823, Principal	
3. UNDER APPLICATION DATE: 20180501	
4. AUTHORIZES: Access and archaeological testing. Maximum volume of excavation 6.5 cubic meters.	
5. ON LANDS DESCRIBED AS FOLLOWS: Within the site known as CA-PLA- 483/H situated in Martis Creek Lake Dam; located on the USGS 7.5-minute Martis Peak (1992) quadrangle within Section 20 of Township 17 North, Range 17 East (Mount Diablo Base Meridian).	
6. FOR PERIOD: 6 July 2018 through 5 September 2018	
7. MATERIALS COLLECTED UNDER THIS PERMIT WILL BE DEPOSITED FOR PERMANENT PRESERVATION IN THE N/A - any materials will be returned to the site of discovery OR IN OTHER ACCREDITED INSTITUTIONS UNDER SUITABLE LOAN AGREEMENTS. A COPY OF A CURRENT, VALID CURATION AGREEMENT MUST BE KEPT ON FILE WITH DISTRICT COMMANDER.	
<div style="display: flex; justify-content: space-between; font-size: small;"> ENG FORM 4923-R, OCT 1988 Page 1 of 4 Pages EDITION OF DEC 86 IS OBSOLETE. (ER 405-1-12) PE v1.00 </div>	

8. CONDITIONS

This permit is subject to the provisions of the Archaeological Resources Protection Act approved October 31, 1979, and the regulations, thereunder, including 32 CFR 229.7 as to Indian lands, and the following conditions:

- a. Archaeological resources shall be analyzed and recorded in the field as much as possible. Collection of cultural resource material solely for later laboratory analysis is discouraged. The grantees will specify in the application when laboratory analysis is anticipated.
- b. Collections of archaeological resources, artifacts and other material removed from public lands under the provisions of this permit remain the property of the United States Government and may be recalled at any time for use of the Department of the Army or other agencies of the Federal Government.
- c. The following individual(s) are authorized to be in direct charge of field work conducted under this permit:
 - (1) Hope Schear
 - (2) Jack Pfertsh
 - (3) Geneva Kraus
- d. The person(s) in direct charge of field work shall be on-site at all times when work is in progress. Failure to comply with permit stipulations will result in removal of subject's name(s) from the approved list of persons-in-direct charge.
- e. During the course of the activities conducted under this permit, the District Commander, or his representative shall have access to the study area of this permit, and during or after completion of this work shall have the right to inspect all artifacts or other materials removed.
- f. At least three copies of all published journal articles (reprints) and other published or unpublished reports and manuscripts resulting from work conducted under this permit shall be filed with the Commander.
- g. Upon request, all field notes, records, photographs, and other data related to this permit shall be made accessible to the COE Archaeologist for review.
- h. Temporary stakes and/or flagging used to identify sites shall be removed upon completion of the project unless otherwise authorized.
- i. Vehicular activity shall be restricted to existing roads and trails unless otherwise authorized. Care shall be exercised to avoid directly or indirectly increasing access or potential vandalism to cultural resource sites.
- j. Disturbed areas shall be kept to a minimum size consistent with the purpose of the study.

l. All test holes shall be backfilled.

m. Living trees shall not be cut or otherwise damaged, unless authorized by the District Commander.

n. Proper precaution shall be taken at all times to prevent and suppress fires. The permittee shall be held responsible for suppression costs for any fires on public lands caused through negligence of the permittee or his authorized representatives. No burning shall be allowed without specific permission.

o. Improvements such as fencing, reservoirs, or other improvements within the permit area shall not be disturbed unless prior written approval is obtained from the District Commander. Any improvement disturbed shall be left in its original or better condition, as determined by the District Commander.

p. The permittee shall be responsible for cleaning up all camp and work sites before leaving the area. Caution shall be taken to prevent littering and pollution on public lands or on adjoining properties. Refuse shall be carried out and deposited in approved disposal areas.

q. In the event that the land in question is under lease or outgrant to a third party, the permittee shall obtain approval and permission from the third party and shall fully compensate the third party for damages caused by the activities of the permittee.

r. The District Commander reserves the right to terminate this permit at any time.

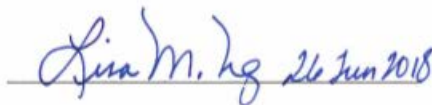
s. Possession or use of firearms on the permit area is prohibited.

t. The United States shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the use and occupation of the said premises, or for damages to the property of the permittee, or for injuries to the person of the permittee (if an individual), or for damages to the property or injuries to the person of the permittee's officers, agents, servants, or employees, or others who may be on said premises at the invitation of any one of them, arising from governmental activities, and the permittee shall hold the United States harmless from any and all such claims except for claims arising out of the negligence or willful misconduct of the Government.

u. SPECIAL CONDITIONS, as marked X in appropriate box on attached sheet.

9. PRELIMINARY REPORT: Within approximately eight (8) weeks of the conclusion of field work a preliminary report of work performed under this permit, illustrated with representative photographs and listing new and significant collected materials should be furnished the District Commander.

IN WITNESS WHEREOF: I have hereunto set my hand by the authority of the Secretary of the Army.

 26 Jun 2018

Lisa M. Ng
Real Estate Contracting Officer
Real Estate Division Deputy Chief
Sacramento District

(REVERSE OF ENG FORM 4923-R)

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SPECIAL CONDITIONS

- ☒ a. This permit shall not be exclusive in character, and there is hereby reserved unto the Government the right to use, lease or permit the use of said land or any part thereof for any purpose.
- ☒ b. Other institutions may be engaged in archaeological research in the general area covered by this permit, and in case there should be conflict with respect to a site not specifically designated in a permit, the parties concerned shall reach agreement between themselves as to which shall work the site.
- ☒ c. Transportation in Department of the Army vehicles cannot be furnished, except in cases where no extra expense to the Department is involved.
- ☒ d. All costs shall be borne by the permittee.
- ☒ e. The exploration or excavation of any Indian grave or burial ground on lands under the jurisdiction of the Department of the Army is restricted solely to qualified archaeologists. No Indian grave or burial ground may be investigated without permission of the governing council of Indians concerns, which supplemental authority must be promptly recorded with the official in charge of the designated area.
- ☒ f. All excavated areas shall be restored by filling in the excavation and otherwise leaving the area in a near to original condition as practicable.
- ☒ g. The permittee shall conduct all operations in such a manner as to prevent the erosion of the land, pollution of the water resources, and damage to the watershed, and to do all things necessary to prevent or reduce to the fullest extent the scarring of the lands.
- ☒ h. Any findings of mined or processed precious metals or other treasure trove in the area covered by this permit are the exclusive property of the Government and shall not be removed from the site without specific written permission from the Department of the Army.
- ☒ i. 3 Copies of the final report, accompanied by a completed Defense Technical Information Center (DTIC) report, DD Form 1473, will be submitted to the District Commander.
- ☒ j. Before undertaking any work on lands administered by the Department of the Army, clearances should be obtained from the official in charge of the area.
- ☒ k. Before undertaking any work on Indian tribal lands or any individually owned trust or restricted Indian lands, clearance should be obtained from the Bureau of Indian Affairs official having immediate jurisdiction over the property.

APPENDIX C

Document Analysis Questions

- When was the text written?
- What was it written for?
- What kind of audience does this person try and reach?
- Who wrote the text?
- Believability of the text?
- Are there political, cultural, or social factors that influenced the document or picture?
- What can the text tell us about community concerns (political, cultural, social)?
- What kind of reaction does the writer expect from the audience?
- Was this text a response to a particular event or a social phenomenon?
- Does the text prompt readers to a certain action?
- How are specific words used, and what do they mean to the participant?
- When does the participant raise topics and what does it relate to if anything?
- Are topics talked about differently at different times?
- Why are some topics brought up more frequently than others?
- How much coverage is given to different topics?
- What positive or negative words are used and when are they used, what context?
- Is an actual event described or hypothetical?
- Major trends or topics across the board?

Photos and analysis

Photo 1:



Who or What: Joerger Ranch (Lindström 2016)

When: Unknown.

How: Still photo taken from a distance facing north east.

Why: Unknown. The photo caption documents what each building in the photo is. It is a black and white photo taken from a distance and shows the landscape, a significant portion of the sky, rolling hills and the homestead. There isn't anything else in the photo and it captures the ominous feeling of being alone on the range.

For whom: Unknown, possibly a domestic photo for the family or an image to document the old farm. It is hard to determine if the ranch was in use when this photo was taken.

Note: This photo proved critically important as it is the only known photo of the site when it still had structures. Today there is nothing left of the site with the exception of a few artifacts and three foundations next to each other.

Photo 2:



Who or what: A portrait of 8 El Dorado County pioneers on a street in Placerville, Ca. in front of what looks like some storefronts (El Dorado Historical Museum Collection).

When: October 18, 1912

How: Still photo with all men in chairs with the exception of one, and they are facing straight forward towards the camera.

Why: Appears to be a press related photo.

For Whom: The public, possible news story.

Notes: All of the men are smiling and wearing suits and top hats. Joseph Joerger is pictured 4th from the left and is the only one in a cowboy hat. He also has a cane.

Photo 3:



Who or what: Euer Family Portrait (El Dorado Historical Museum Collection).

When: Unknown.

How: Still photo, black and white, outdoor setting.

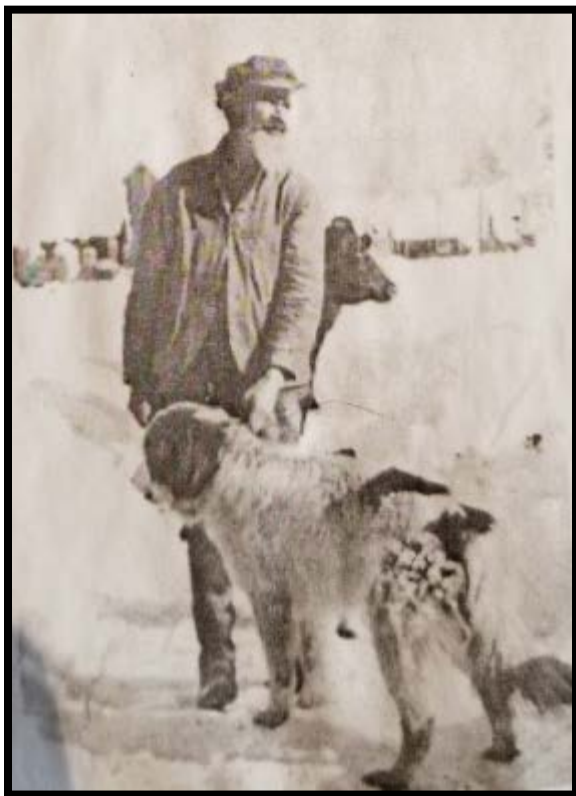
Why: Unknown occasion; family photo.

For Whom: Domestic photo of the family for the family.

Notes: Nine people pictured in the photo. The three females are in formal dresses and looking directly at the camera. The female who appears to be the matriarch is sitting and

the other two females are standing behind and slightly to the left of her. There is one male who is standing behind the two standing females (possible sibling or husband), Three men are standing in the very back and are looking left so they appear to present more of a profile image and an older gentleman is sitting and looking directly at the camera. A young man perhaps age 10-13 is sitting in the very front and looking left in a profile view. All are dressed in formal suits and ties but do not have hats.

Photo 4:



Who or what: Joseph Von Flue near his residence and dairy farm (Lindström 2016).

Pictured with what looks like a St. Bernard type dog.

When: Unknown.

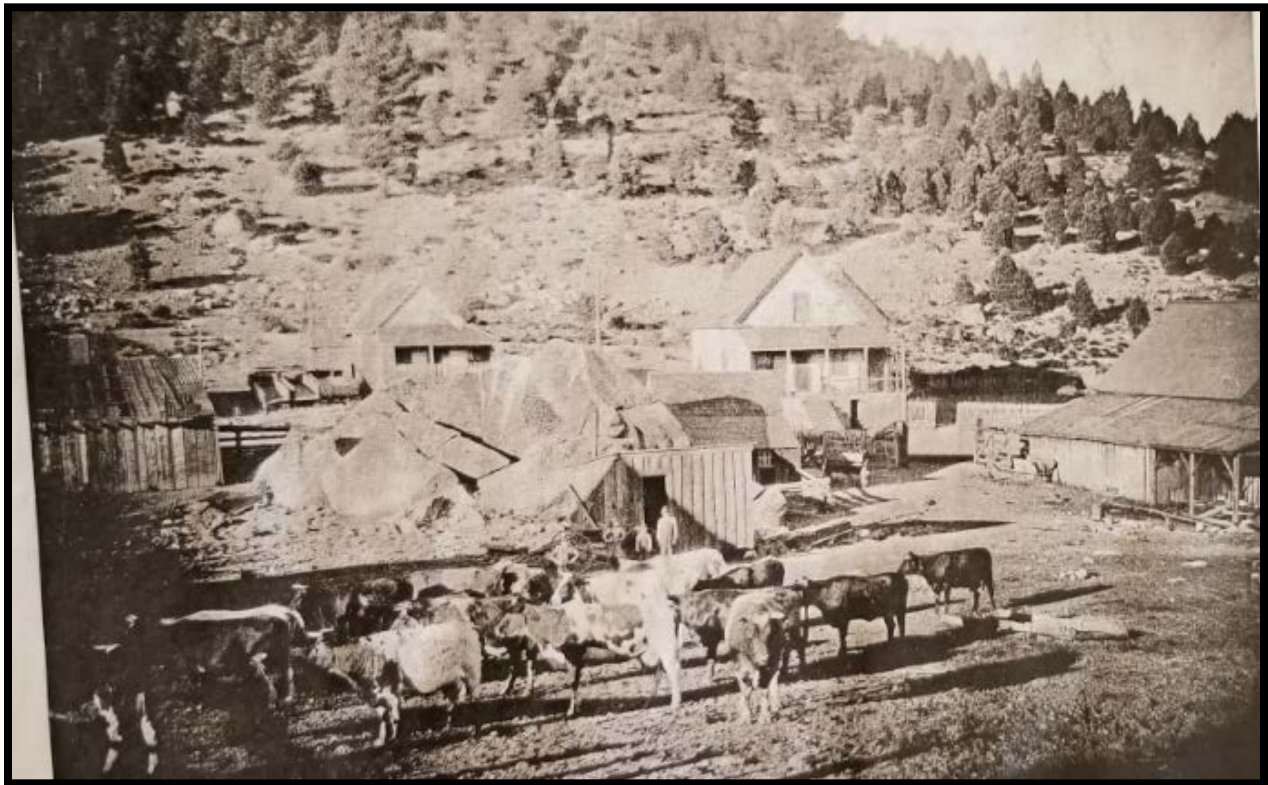
How: Still black and white photo.

Why: Unknown. Domestic photo of Mr. Flue in the winter near his dairy farm. He has a cow behind him and his dog at his feet. He is looking off to his left and his residence can be seen in the background. The focus is on the man and not the landscape.

For Whom: Unknown, possible family photo.

Notes: Informal attire and a hat. It appears he is wearing jeans, boots, and a jacket over other clothing. Nothing flashy and he is smiling.

Photo 5:



Who or what: Picture of the McIver Dairy in Truckee (Lindström 2016).

When: Unknown but after 1890 when they arrived in Truckee from Ireland.

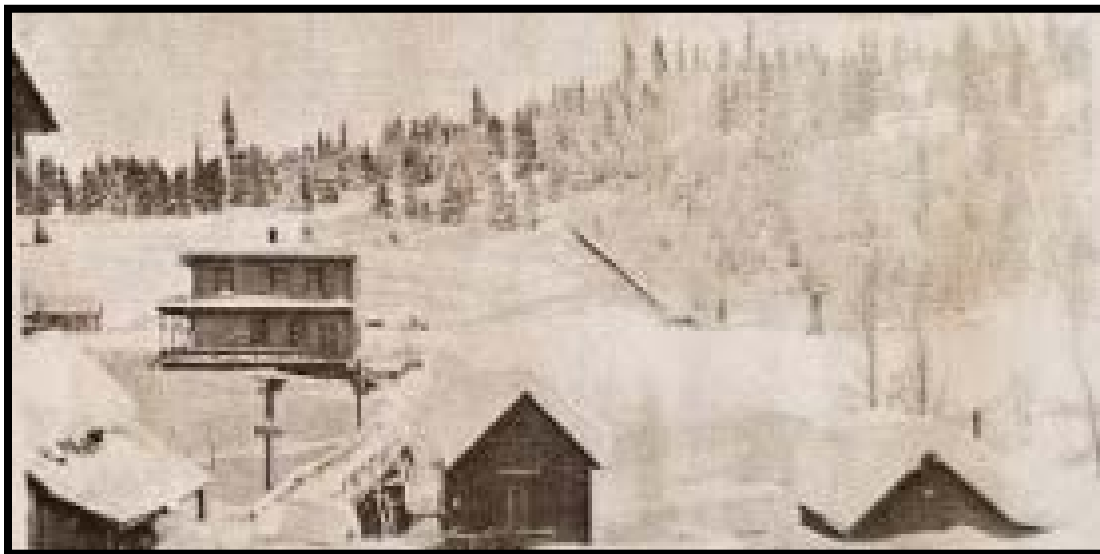
How: Still, black and white photo.

Why: Unknown. Possibly domestic photo.

For Whom: Unknown. Possibly the family records.

Notes: Photo from a distance shows the farming operation and several residences, cows, and a man and three children (two boys and one girl). The Man and three children are facing the camera and two of the children appear to be posing with their hands on their hips.

Photo 6:



Who or What: Winter image of a footbridge that crosses the Truckee River to the Von Flue home and dairy (Lindström 2016).

When: Unknown.

How: Still photo taken from a distance.

Why: Unknown. Possibly personal or to illustrate a story.

For whom: Unknown.

Note: Picturesque image of the snow and gives a sense of the intense winters one might experience in Truckee.

Photo 7:



Who or What: Group of school children and two females from the Joergers family

(El Dorado Historical Museum Collection).

When: Unknown.

How: Still photo taken for school.

Why: School portrait.

For whom: The school and family.

Note: They are all dressed casually, they are all looking at the camera, they seem like they want to smile but norms of the era promoted subdued expressions while posing for photographs.

Photo 8:



Who or What: Crooks family home in Salmon Falls. Right to left: Mrs. Crooks, Mrs. Ada Joerger, Mrs. Ella Anderson, Mr. George Crooks, Addie Plumb, Mrs. Ida Wulff (El Dorado Historical Museum Collection).

When: 1885.

How: Still photo taken from a distance.

Why: Unknown.

For whom: Domestic photo.

Note: The cattle look emaciated and the horse is hooked up to a cart. Photo has a strangely artistic but disturbing aspect. Spacing of the subjects possibly represents different family groupings or socially repressed relationships.

Photo 9:



Who or What: William B. Plumb and his wife Sophie (maiden name Silberborn), daughter Addie, their family animals, and their Chinese handyman in the background (El Dorado Historical Museum Collection).

When: 1884.

How: Still photo taken from a distance to capture their new 280-acre farm on the south fork of the American River.

Why: Family portrait.

For whom: For personal use.

Note: Unique posing, the daughter is looking away from the camera and all their domestic animals are part of the image. This is clearly a staged portrait yet their handyman is in the distance. It was mentioned in the caption that when the water was high, he would row the daughter to school, so he must have been a trusted member of the farm. Why was he in the distance and not more prominent in the photo like the cat and dog? They are all dressed in their formal attire.

Photo 10:



Who or What: Mr. E.H. Joerger, two children and a vehicle (El Dorado Historical Museum Collection).

When: Unknown.

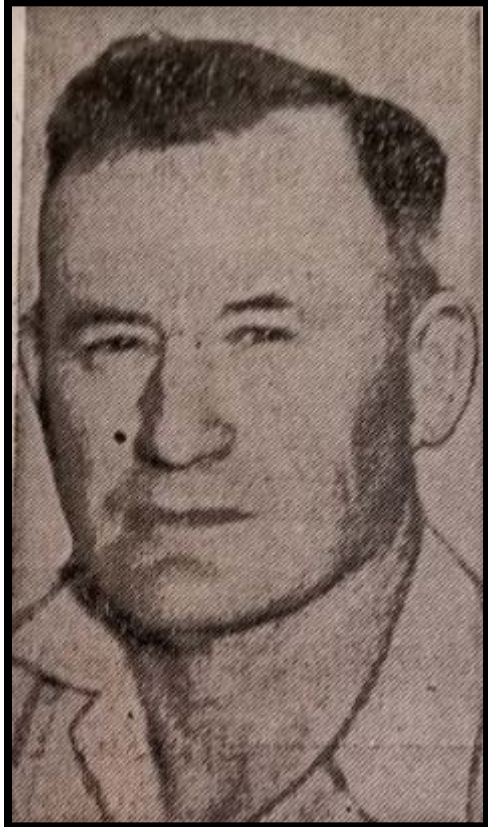
How: Still photo.

Why: Domestic use.

For whom: Personal, family.

Note: This looks like a typical happy family photo maybe taken on an outing in their vehicle.

Photo 11:



Who or What: Mr. E. Joerger (El Dorado Historical Museum Collection).

When: 1950

How: Still photo.

Why: Newspaper portrait.

For whom: Public.

Note: The photo was taken as part of an expose' on Mr. Joerger who bred a prize dairy cow. The article gave a bit of information about his life, his father, and how he came into the cattle and dairy business.

Photo 12:



Who or What: Ella Joerger and William Waddle wedding party (El Dorado Historical Museum Collection).

When: 1901.

How: Still photo taken from a distance.

Why: Wedding photo.

For whom: Domestic use.

Note: Everyone is dressed nice and looks happy to participate in the event and photo.

Photo 13:



Who or What: Salmon Falls School. (El Dorado Historical Museum Collection).

When: 1884.

How: Still photo.

Why: School portrait.

For whom: The school and parents.

Note: This school had 62 children in 1857 and by 1884 this photo shows a significant reduction in attendance once the miners left. The men's stature appears very similar to the women in the photo.

Photo 14:



Who or What: Joseph E. Joerger (El Dorado Historical Museum Collection).

When: Unknown.

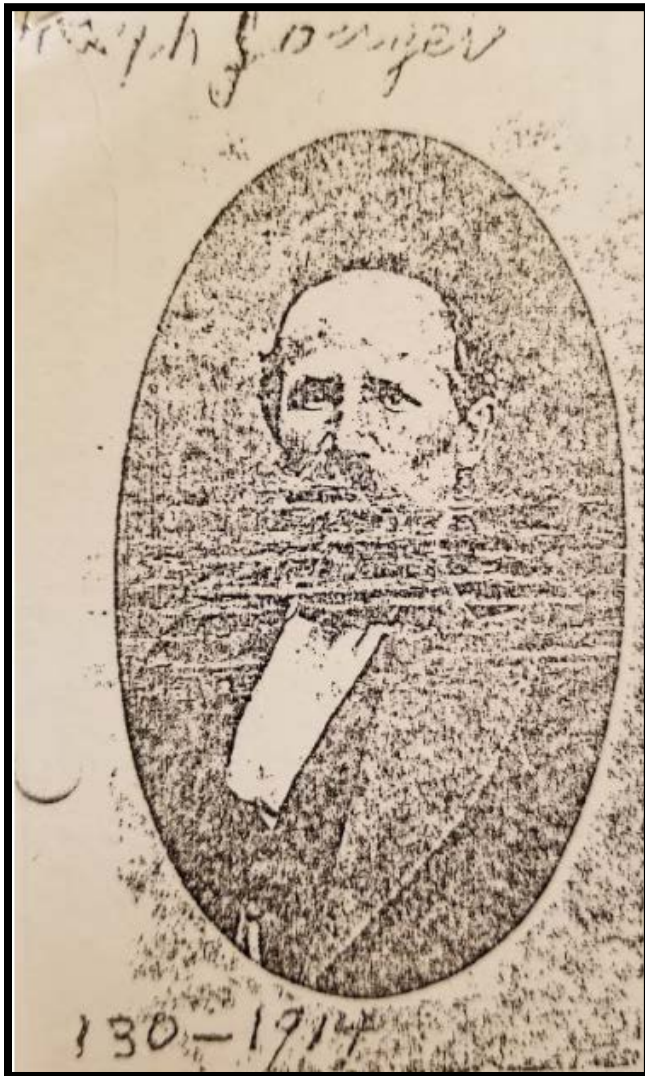
How: Still photo.

Why: Family portrait.

For whom: Domestic.

Note: Posed photo of a family in coordinated outfits and with their dog. It was not clear where the photo was taken.

Photo 15:



Who or What: Joseph Joerger (El Dorado Historical Museum Collection).

When: Unknown.

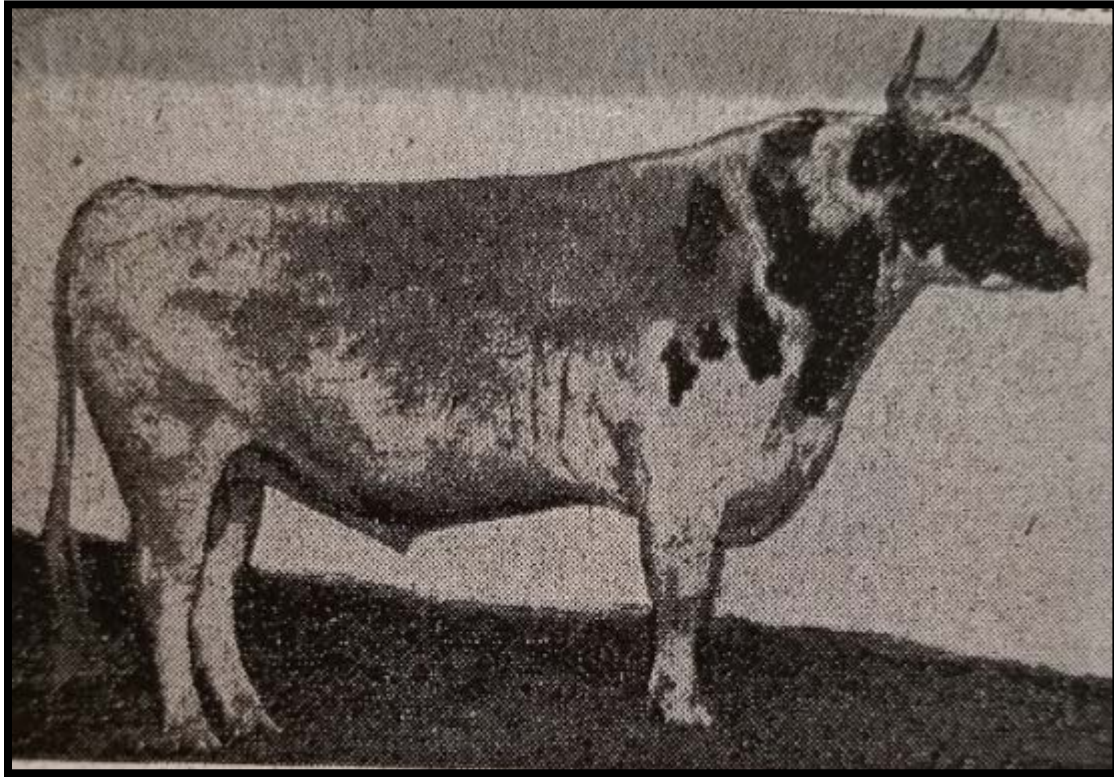
How: Still photo.

Why: Newspaper obituary.

For whom: Public

Note: Grainy portrait of Mr. Joerger when he was much younger and lists his birth and death year.

Photo 16:



Who or What: Ayrshire bull (El Dorado Historical Museum Collection).

When: 1950.

How: Still photo taken from a distance.

Why: Newspaper article.

For whom: The public.

Note: This image is of the prize bull that E.H Joerger bred after some years of trying to build on his father's dairy success.

Photo 17:



Who or What: State historic statue commemorating the Mormon Tavern which was the first place where a pony express rider turned around. It later became the Joerger family home (El Dorado Historical Museum Collection).

When: 1993.

How: Still photo.

Why: Newspaper photo.

For whom: The public.

Note: The photo highlights the longevity of the family and their importance to the local area and history.

Photo: 18



Who or What: Nellie Skinner and Will Joerger (El Dorado Historical Museum Collection).

When: 1910.

How: Still photo.

Why: Personal wedding portrait.

For whom: Domestic image.

Note: With the exception of personal style, not much has changed over the years. This is a common type of photo used to commemorate a wedding. The couple appears very happy.

Photo 19:



Who or What: Mr. Joseph Joerger, his wife, granddaughter, and a pug and cat (El Dorado Historical Museum Collection).

When: Unknown.

How: Still photo taken for a portrait.

Why: Unknown.

For whom: Domestic use.

Note: Family photo of grandparents and their grandchild. Probably taken for domestic use. Family animals appear in the photo. This seems to be a theme in many of the family portraits of the period.

Photo 20:



Who or What: Mr. Cavitt (left), a local dairy cattleman in Truckee and neighbor of Mr. Joerger, pictured with an unknown male after a successful hunt (Lindström 2016).

When: Unknown, but Mr. Cavitt moved into the Truckee area around 1905.

How: Posed photo of the two successful hunters.

Why: Commemorates their success and teamwork.

For whom: Unknown. This image could have been for personal use or been a newspaper image. Unknown where this image was taken.

Note: They are dressed casually in the photo and look like they just came back from the hunt. The handshake is an interesting addition to the photo and shows that they worked together as friends. Standing in front of the game with guns in hand is a very masculine image and also shows the tools used that day to achieve their goal.

APPENDIX D

SAMPLE UNIT ARTIFACT COUNT SHEET

[illegible]

APPENDIX E

Phase III: Data Recovery Plan

Background

This thesis provides a detailed historic context, description of the physical environment, applicable research questions and data requirements (Appendix A), and justification for why Phase III data recovery efforts should be considered if the site is to be significantly impacted by future Martis Creek Lake and Dam projects. If data recovery is determined necessary a data recovery plan has been provided below to assist in that effort and should be expanded upon through consultation with the agency and with the development of a detailed research design.

Research Objective

According to Hardesty (1991:4), “Interpreting the material expression of the regional culture of the American West has been of particular interest to historical archaeologists...” Data recovery at the Old Joerger Ranch (CA-PLA-483/H) should focus on fleshing out historical details through on-site data collection and documentary research. Therefore, a research design should be developed that focuses on techniques that would allow for further investigation into: site structure and land use patterns; economic strategies; health; consumer behavior and technology; ethnicity and social status; and family life and the household. Archaeological field tests have revealed intact archaeological deposits that have the potential to yield valuable information on

the lifestyle and seasonal ranching activities actively taking place from at least 1876 to the 1930s within the Martis Valley, California.

Personnel Qualifications

Key personnel required for this investigation including the principal investigator, field director, laboratory director, and any specialists whose skills would be necessary to achieve success, should provide documentation of their qualifications meeting the Secretary of Interior Standards for their profession. If any duties are delegated to other personnel, they should also meet these same standards. (WASurvey N.d.)

Excavation Methods

Based on the distribution of artifacts, size of the site, and topography, it is recommended that a controlled surface collection of artifacts, followed by hand excavation of the previously identified features and artifact concentrations, be undertaken. A detailed topographic map of the site and an excavation grid should be established before excavation begins. 2x2 meter block excavation units are recommended and can be expanded upon if determined necessary in the field (WASurvey N.d.). Systematic auger tests in areas not tested in this thesis should be undertaken to determine if there are other subsurface deposits present. Unit 3, Unit 4, Auger 4, and Auger 5 are ideal locations to begin the excavation based on their data potential revealed through testing completed in this thesis. All established units should be excavated in 10 to 20cm levels and screened through the appropriate size screen

based on soil conditions within the units until all artifacts are recovered and bare ground is reached. OSHA safety standards should be reviewed before embarking on excavation. Soil samples should be recovered from around the site and within each excavation unit. Samples should be large enough to yield useful results and specialists in faunal analysis, archaeobotany, and geoarchaeology should be consulted to develop sampling designs. (WASurvey N.d.)

If human remains are discovered during excavation all activity will stop on site and the appropriate authorities will be notified. The county sheriff and county coroner have jurisdiction over any human remains found. If it is determined that the remains are not modern or part of a crime scene and they relinquish their jurisdiction, the Corps will assume responsibility for the remains and any possible funerary objects, sacred objects, and objects of cultural patrimony. The Corps will meet the requirements of the Native American Graves Protection and Repatriation Act in accordance with 43CFR10.

(Greubel et al. 2010)

Documentation Requirements

- Photographs of the artifacts, excavated units, and overall site that can be used with 3-D rendering software.
- A detailed technical report that presents the results of the excavation, summarizes and interprets what was found building on the historic context, and includes the subsequent results of any dating completed for the site, artifact analysis, and tests on the soil samples, faunal remains, and botanical ecofacts.