

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property



historic name Empire Mine Historic District (Expanded Boundary)
other names/site number Empire Mine State Historic Park, California Historic Landmark No. 298, P-29-003144, ASC-21-08-2246

2. Location

street & number 10791 East Empire Street not for publication
city or town Grass Valley vicinity
state California code CA county Nevada code 057 zip code 95945

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide ___ local

Signature of certifying official _____ Date _____
Title _____ State or Federal agency/bureau or Tribal Government _____

In my opinion, the property ___meets___ does not meet the National Register criteria.

Signature of commenting official _____ Date _____
Title _____ State or Federal agency/bureau or Tribal Government _____

4. National Park Service Certification

I, hereby, certify that this property is:

___ entered in the National Register ___ determined eligible for the National Register
___ determined not eligible for the National Register ___ removed from the National Register
___ other (explain:) _____

Signature of the Keeper _____ Date of Action _____

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5. Classification

Ownership of Property
 (Check as many boxes as apply)

Category of Property
 (Check only **one** box)

Number of Resources within Property
 (Do not include previously listed resources in the count.)

<input checked="" type="checkbox"/>	private
<input type="checkbox"/>	public - Local
<input checked="" type="checkbox"/>	public - State
<input type="checkbox"/>	public - Federal

<input type="checkbox"/>	building(s)
<input checked="" type="checkbox"/>	district
<input type="checkbox"/>	site
<input type="checkbox"/>	structure
<input type="checkbox"/>	object

Contributing	Noncontributing	
3	7	buildings
0	0	district
123	0	site
354	0	structure
10	0	object
490	7	Total

Name of related multiple property listing
 (Enter "N/A" if property is not part of a multiple property listing)

Number of contributing resources previously listed in the National Register

N/A

3 (originally 19 previously listed, of which 16 are now contained in newly listed sites above)

6. Function or Use

Historic Functions

(Enter categories from instructions)

EXTRACTION/extractive facility
 PROCESSING/manufacturing facility
 PROCESSING/industrial storage
 INDUSTRY/energy facility
 INDUSTRY/waterworks
 DOMESTIC/single dwelling
 (see Continuation Sheet, page 52)

Current Functions

(Enter categories from instructions)

RECREATION AND CULTURE/outdoor recreation
 RECREATION AND CULTURE/museum
 RECREATION AND CULTURE/monument/marker
 LANDSCAPE/park
 LANDSCAPE/garden
 LANDSCAPE/street furniture/object
 (see Continuation Sheet, page 52)

7. Description

Architectural Classification

(Enter categories from instructions)

Tudor Revival
 Industrial
 Shingle Style
 Bungalow / Craftsman
 Gothic Revival

Materials

(Enter categories from instructions)

foundation: Stone, concrete
 walls: Stone, brick, shingle, iron, stucco, glass
 roof: Shingle, iron
 other:

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Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Empire Mine Historic District is an expansive gold mining landscape composed of 493 contributing resources. It is situated in the rural hills southeast of Grass Valley, a small, Gold Rush-era community located in Nevada County, California, at the snow line of the Sierra Nevada's western slope. The 855-acre District encompasses portions of Ophir, Osborne, and Union hills, which are separated by Little Wolf Creek and Woodpecker Ravine. Portions of South Fork Wolf Creek and a number of small ravines and gullies are also contained within its boundary. Stands of pine and oak cover the slopes and ridgelines, and dense riparian forests line the waterways. The most heavily mineralized and richest gold veins in California are located in the Grass Valley mining region. Eroded surface placers from exposed veins once lined every waterway, and deeply buried Tertiary deposits are also present. The Empire Mine was first worked in 1850 and became one of the most successful lode mines of the area, combining with many surrounding ventures over time and eventually obtaining mineral rights to almost 4,000 acres. The enterprise grew under different names, operating virtually uninterrupted until 1957. The infrastructure of 67 individual mine operations, many of which represent competing interests, are strung along the District's transportation and water supply network. Artifact deposits and dwellings—few of which are still standing—represent the interconnected mining community and handful of ranches and homesteads that developed to support it. Hundreds of individual prospects that dot the landscape between the larger, more developed property types are ubiquitous reminders of intensive exploration and geologic mapping efforts. Many elements of the District serve as interpretive focal points for the State Historic Park. This nomination update expands the District's boundary, identifies many additional resources contributing to the District's significance, and reclassifies contributing resources including most of the buildings already listed. In order to eliminate confusion this document frequently references the prior nomination.

Narrative Description

Overview of Empire Mine Historic District

The Empire Mine Historic District is a large and complex property composed of 493 contributing resources and encompassing 855 acres. Its components range from well-preserved and architecturally important buildings within the centrally located Empire Mine and Mill Complex (P-29-1487) to numerous outlying archaeological sites, structures, and objects, possessing varying degrees of integrity. All of the contributing resources are associated with the theme Gold Mining in the Sierra Nevada, 1848–1957. A robust industry evolved over 100 years of gold mining in the region. William Clark (1979:54) noted in his *Gold Districts of California* that many famous engineers and geologists hailed from the gold mines around Grass Valley, and important inventions and improvements were made there. The Empire Mine Historic District was the site of hundreds of extraction and milling operations of various sizes and eras, ranging from solitary prospectors to joint-stock or heavily-capitalized companies. Many of the most successful mines in the state operated within the District alongside the Empire Mine. Competing interests obtained the mineral rights of large tracts, eventually creating a vast mineral holding that completely surrounded the city of Grass Valley. Old workings were periodically upgraded and new explorations launched. By the end of the period, the Empire-Star's mineral rights consisted of nearly 4,000 acres, of which about 22 percent is now situated below the District. The Empire Mine was the engine of this one-of-a-kind operation.

An impressive and well-maintained complex of buildings and structures is centrally located in the District. Small shaded rural roads continue to access the arrangement of turn-of-the-century buildings situated behind tall stone fences. The mineyard and cottage grounds still express the boom era setting of the mine. Other nearby buildings

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reflect rural settlement dating to the 1870s, as well as mine development as recent as 1947. Much of the mining infrastructure beyond is abandoned and is in various states of decay. Hundreds of resources are present, however, that clearly convey the property's relationship to its gold mining legacy, particularly when considered in concert. A dense assortment of archaeological property types—from dwellings to complex mines—is linked by transportation and water conveyance structures. Combined, they form a recognizable mining landscape. Massive waste rock dumps and surface plant ruins are plentiful, while some areas contain a lone wagon road alongside a heavily prospected gully or hillside.

The District's architectural resources range from the magnificent 1897 Bourn Cottage, designed by prominent San Francisco architect Willis Polk, to the rustic cabin of George Sing O'Yung, the Chinese grounds keeper. Other buildings include the 1870s and 1890s residences of mine owners whose properties were incorporated into the Empire Mine complex, as well as the shingled and log cottages of the mine workers, with their associated barns, sheds, garages, and other outbuildings. The Bourn Cottage and its complex of clubhouse, stables, garages, conservatory, and support facilities are enclosed within a lush environment of gardens, terraces, shrubbery, trees, and water features; while the mine and mill buildings and features are surrounded by a barren industrial landscape. Architecture contributing to the District's significance is described in detail below, following the discussion of the various property types identified.

The Empire Mine is listed in the California Register of Historical Resources (CRHR) and was registered in 1939 as California Historical Landmark 298 (OHP 1990). At the time, the mine was recognized as the oldest lode mine in continuous operation in the United States. Manzanita Parlor No. 29 of the Native Daughters of the Golden West, dedicated a plaque there on 17 March 1963 that reads, "Empire Mine, This plaque marks the site of the Empire Mine noted for its continuous operation 1850–1957 producing over \$120,000,000 in gold." California Department of Parks and Recreation acquired 770 acres of the District in 1974, including the core area of the original Empire Mine, as well as the remains of several other ventures. The property became the Empire Mine State Historic Park in 1976, and placed on the National Register as the Empire Mine Historic District in 1977. The boundary was established to "encompass the entire Empire Mine property" (Welts 1976:36), though it actually encompassed only the Empire Mine State Historic Park as it was configured in 1976. The total holdings of the gold mining company were far greater than those encompassed by the Park, and the Park boundary has grown by acquisitions from 770 to 853 acres (Rand California 2009). The 2009 Park boundary serves as the revised boundary for the Historic District. A two-acre parcel owned by Philip Oyung is situated within the Park. It is encompassed by and included in the Historic District.

The District's 1977 listing on the National Register was based on 19 historic buildings and structures clustered around the center of the Park that add to the District's significance under historical archaeology, architecture, and industry for the periods 1800–1899 and post-1900. No other buildings, structures, objects, archaeological sites, or landscapes were identified or evaluated with the 1977 listing. Most of the listed buildings have been re-classified in this present nomination as elements of more complex resource categories based on a recent intensive inventory. Most notably, 14 of these buildings are within the Empire Mine and Mill Complex (P-29-1487), which is counted as a single new site in this nomination update. The Warehouse, one of the originally listed buildings, is no longer standing. Similarly, the previously listed Rowe Mine headframe and ore bin and the ca. 1870's Cassidy Dwelling have been reassigned as components of distinct sites, P-29-3114 and P-29-3120, respectively. Only three of the previously listed 19 resources remain individually classified as buildings. These include the Kendall dwelling (P-29-3767) and two separate shingled cottages believed to have housed mine employees (P-29-3097 and P-29-3123). District architecture is described further below.

Little development has occurred since the mine was abandoned in the 1950s. The spectacular built environment of the District is heavily visited and houses park facilities and staff residences, thereby continuing its role as the mine's core. Recreational trails and service roads still radiate from the center as in the past. Some incorporate

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historic alignments that pass heavily-mined or inhabited areas while others wind through fields of mining waste dumps and placer mining landscapes. Tall foundations of forgotten gold mines are distributed throughout the landscape, paired with the large and distinctive dumps of waste rock. Modern fire suppression activities and invasive plant abatement have rendered much of the historic landscape visible. Minimal alterations include signage at some of the historic properties, and fencing at some areas where hazardous conditions exist. Three reconstructed buildings added to the mineyard based on historic records do not contribute to the District, nor do a modern comfort station and separate meeting building that have been added. A complex of modern buildings and structures in the Park maintenance yard, which is set apart and shielded from view, as well as Phil Oyung's dwelling complex, were built after the Period of Significance and do not contribute to the Historic District.

Extensive archival research and only limited field study was conducted on the Empire Mine before the studies associated with this National Register update. Ten cultural resources studies have been carried out within the current District boundary, most of which consisted of cursory cultural resources surveys. Denise Jaffke (2006) reported on a survey for a trail connector project through Woodpecker Ravine. Her study included archaeological sampling of an extensive domestic artifact deposit adjacent to the Empire Mine visitor center overflow parking lot (now Locus D of P-29-1487). The linear survey was restricted to the trail alignment itself. This excavation is the only controlled archaeological study in the Park other than surface inventory. Recent intensive survey of the entire District has provided comprehensive information on historic context and the number, type, associations, and condition of identified cultural resources (MFG, Inc. 2008; Selverston 2008, 2009a, 2009b). For reasons of safety, none of the vast underground workings beneath the District have been surveyed or evaluated.

Given California's association with the Gold Rush and an enduring passion for gold mining, it is not surprising that several comparable districts are listed on the National Register. The California Office of Historic Preservation's Information Management Unit compiled a list of seven comparable districts determined significant for their relationship to gold mining in the Sierra Nevada, 1848-1957: Bodie mines, Coloma Marshall gold discovery site, Gladstone mines, Gold Bug mines, Kennedy mine, Malakoff hydraulic mine, and the Plumas-Eureka mill and Jamison mines. These historic districts reflect a range of specific associations, from John Marshall's gold discovery site in El Dorado County to the largest hydraulic mine in the state. They represent efforts stretching across the greater gold mining region of California, from the Gladstone Mine in the Klamath Range to Bodie on the east side of the Sierra. Listed gold mining properties are most concentrated in the Northern Mines region of the Sierra Nevada, particularly in Nevada and El Dorado counties. Given the association with the same historic context as the Empire, all of these properties share predictable characteristics. All, in fact, contain mine buildings and structures related to one facet or other of the industry. All appear to contain habitation remains with potential to address important research issues. Some contain resources pertaining to the same long period of activity. None, however, contain anything close to the number or variety of contributing resources reflecting such a broad range of individual operations. Even in light of these nationally recognized historic districts, the Empire is unparalleled in its representation of its association and type at the state level.

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Contributing Resources

The District contains 493 resources that contribute to its significance, including 3 previously listed on the National Register. There are 29 unique property types in the District (see Table 1). Every property type is a grouping of individual properties that share physical or associative characteristics, such as lode mines or water conveyance ditches (i.e., the District contains 24 individual lode mines and 40 ditches). Every property type represents a number of distinct feature systems embedded within a large and complex landscape. A few of the properties contain extant infrastructure, which is discussed below under architecture. Frequently, the historic association is well known, as is the case of the Empire Mine and several other large gold mines. Mineral patents were granted for most of the Historic District, involving detailed surveys and affidavits regarding improvements. Most properties in the Park are related to some known historical event either directly, such as an actual name and date of use for specific resources (e.g., Orleans, Pennsylvania, and Prescott Hill mines), or indirectly, by way of understanding the overall pattern of events, such as overlapping mining landscapes within identified mineral patents.

Property Type	Count	Property Type	Count	Property Type	Count
Ancillary mining complex	1	Lode mine	24	Placer mine complex	5
Artifact deposit	28	Lode mine and mill	5	Prospect	222
Corral	1	Lode mine and mill complex	4	Ranch complex	2
Dam/reservoir	4	Lode mine complex	6	Ranch element	2
Ditch	39	Mining landscape	14	Rural road	36
Drain outlet	3	Mining landscape complex	2	Tailings impoundment	3
Dwelling	17	Monument	8	Tramway	1
Fence line	6	Orchard	1	Utility line	9
Hole	10	Penstock	2	Wagon road	30
Homestead complex	1	Placer mine	7		
Total Properties					493

Properties differ substantially in complexity and size, and contain different proportions of buildings, sites, structures, and objects. The Empire Mine and Mill Complex (P-29-1487) at the center of the Historic District, for example, is composed of hundreds of resources distributed over more than 50 acres. Similarly, the 24 lode mines in the Historic District range in number of components from 48 to 2, with the average composed of 10 distinct features. Many architecturally exquisite buildings are present in the District, most of which are clustered at the heart of the Park within the Empire Mine and Mill Complex (P-29-1487). Their architecture is described in detail following these property type definitions. At the other end of the spectrum are simple mining prospects distributed throughout the Historic District, the vast majority of which are simply shallow excavations and piles of dirt.

Most Historic District properties are relatively simple, comprised of few resources with easily understood functions. Prospects alone account for 45 percent of identified properties. If one includes elements of transportation networks and water systems in the tally—consisting primarily of ditch or road segments—68 percent of the District’s properties are accounted for. Another 6 percent consists of fence and utility lines, property markers, an orchard, and a corral, and a handful of features with unclear functions. Ditches and roads provide particularly

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strong links to the various technologies that were used during different periods, as well as to the type of settlement that occurred historically in the goldfields of the Sierra Nevada.

Substantial feature systems constitute the remaining 25 percent of properties in the Historic District. Half of these ($n = 63$) are industrial components, each reflecting elements of the historic context (e.g., lode and placer mines, mills, mining landscapes). Slightly less than half ($n = 50$) are domestic, including numerous artifact deposits and dwellings, as well as a handful of properties associated with agricultural endeavors. Only 4 percent ($n = 18$) contain related mining and domestic feature systems. The properties containing mining technology feature systems are by far the largest elements in the Historic District, encompassing nearly 30 percent of the total Park acreage.

The diversity and large number of property types in the Historic District represents several classes of properties that share common characteristics. The seven categories identified at the Empire Mine are: complex mining, mining technology, mining community, water system, transportation, prospecting, and simple properties. Each class is discussed with specific examples following Table 2, which provides the number of properties within each class, as well as the specific property types comprising each. The architectural properties are described next followed by a summary of the condition of District elements. All 493 contributing resources are listed on continuation sheets in Table 4 by property class and type, (beginning on page 53 and the location of each depicted on a series of sketch maps (see pages 78 to 84).

Property Class (Number; Percent of Total Properties)	Property Types (Number Identified in Historic District)
Complex mining group (18; 4%)	Ancillary mining complex (1); Lode mine and mill complex (4); Lode mine complex (6); Mining landscape complex (2); Placer mine complex (5)
Mining technology group (63; 13%)	Hole (10); Lode mine (24); Lode mine and mill (5); Mining landscape (14); Placer mine (7); Tailings impoundment (3)
Mining community group (50; 10%)	Artifact deposit (28); Dwelling (17); Homestead complex (1); Ranch complex (2); Ranch element (2);
Water system group (48; 10%)	Dam/reservoir (4); Ditch (39); Drain outlet (3); Penstock (2)
Transportation group (67; 13%)	Wagon road (30); Rural road (36); Tramway (1)
Prospecting group (222; 45%)	Prospects (222)
Simple group (25; 5%)	Corral (1); Fence line (6); Monument (8); Orchard (1); Utility line (9)

Complex Mining Properties

This class of property represents a combination of mining and domestic activity. The 18 complex mining properties constitute 4 percent of all properties discovered, encompassing 93 acres, or 11 percent of the Park. This category includes the most diverse resource type in the Historic District—the lode mine and mill complex. The four sites of this type combined encompass approximately 73 acres, with each containing various combinations of buildings, structures, objects, features, and artifacts associated with ore extraction, beneficiation, and habitation. The type of habitation evident ranges from individuals to companies of miners associated with landscapes, dwelling ruins, and extant buildings. Since this type of property is a combination of mining technology and mining community features, it contains the same types of resources present in these two categories that are further discussed below.

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Though a small percentage of the total properties, examples of this type are generally large, encompassing multiple loci, and typically have clear historic associations. The Empire Mine and Mill Complex alone encompasses over 50 acres, contains over 100 buildings, structures, objects, and archaeological features, and its extensive documentary chronology is abundantly clear. While the Empire operation is well known, other complex mining properties are not. However, identifying activities and periods for properties in this class tends to be straightforward, and is attainable for the others within the Historic District.

Mining Technology Properties

This class of property represents mining and milling activity without habitation. The 63 mining technology properties constitute 13 percent of all properties discovered, encompassing 146 acres, or 17 percent of the Park. Gold mining was the preeminent activity in the Park, and a variety of technologies used throughout the period of significance are evident in the large number of properties of this class, as well as the 18 complex mining properties discussed above. Combined, mining technology resources constitute 16 percent of all the properties in the Historic District, encompassing 239 acres, or 28 percent of the Park.

A gold mine contains lode or placer extraction feature systems, depending on the type of mineral deposit targeted. A lode mine typically consists of multiple feature systems that may include adits, shafts, ore car or tramway systems, cuts, waste rock, surface plants, ventilation systems, hoist works, drainage systems, and/or tangible evidence of any of these. It can be as simple as a single incline shaft portal with an associated dump, or as complicated as a combination of all these features. A placer mine typically consists of a series of mining features, including stacked or piled placer tailings, stacked-stone alignments, channels, sluice or hydraulic cuts, coyote holes, or drifts into buried Tertiary deposits. It can be as simple as a single placer tailing along a creek or as complicated as a combination of all the typical features. Common beneficiation elements include stamp or other types of mills, tailings, and collection facilities such as concentrators or flotation systems. The cyanide vat foundations of the Empire Mine are a particularly evocative set of features. Large tailings impoundments (debris dams) were constructed in the early 20th century to prevent fine sediment debris disposed at the tail end of a beneficiation process from clogging up waterways and valleys. Activities ancillary to ore extraction and processing required assay facilities, offices, workshops, and specialized storage facilities like powder houses and safe places to keep bullion.

Mine landscapes with significant concentrations of resources in contained areas consist of densely organized lode and/or placer prospecting and/or extraction feature systems. Although reflecting intensive mining activity, mining landscape properties generally lack evidence of developed surface plants (e.g., hoist works, power generators), beneficiation, or ancillary facilities. Sparse or isolated historic artifacts may be present, such as a shovelhead or a shard of bottle glass. Lode mine landscape properties are characterized by uneven and cratered ground surface created by prospecting and extraction activity. The result can appear like animal burrows, leading to the popular period term, "coyoteing." Gudde (1975:392) described the term as a mining method "likened to the digging and burrowing of the coyote." Though commonly associated with buried placer extraction, this method was also used to chase free gold back to its lode. Placer mining landscapes are characterized by a cut bank and placer tailings, and are differentiated from placer mines by less-focused systems. Many of the mining landscapes identified in the Historic District contain overlapping lode and placer feature systems.

Mining Community Properties

This class of property is associated with domestic settlement. The 50 mining community properties constitute 10 percent of all properties discovered in the District, encompassing just 22 acres, or 3 percent of the Park. However, the 18 complex mining properties also contain the types of resources discussed here. The District experienced sparse settlement, often by mobile individuals or companies of miners prospecting, or by wageworkers developing one of the many mines that were present. Some of the miners who settled in what is now the Park built substantial

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homes and resided for extended periods with their families. These properties contain evidence of the mining community during the Historic District's period of significance.

The 17 isolated dwellings include extant homes, cabin remains, and flats where temporary camps were established. Evidence of habitation includes both standing buildings and archaeological manifestations of habitation, such as stone or brick foundations, cellars, chimneys, flats, and/or artifact assemblages containing structural items such as large quantities of brick, fasteners, or window glass. Ancillary buildings or structures, such as a garage, workshop, or pump house, or their remains, may complement dwellings. This property type is relatively easy to date given the types of remains characteristically present, such as artifact deposits. These archaeological resources consist of sparse-to-dense concentrations of historic-era artifacts, either surface sheet concentrations or accumulations filling natural or cultural hollow features, such as a gully or privy. Though no subsurface deposits have been identified, they are expected within mining community and complex mining properties.

Ranch/homestead properties ring the mines. These properties consist of a mosaic of feature systems: artifact deposits, dwellings, ranch elements such as barns, and other simple feature systems including fence lines, corrals, and orchards. This property type represents the ubiquitous subsistence farm or homestead that characterizes rural settlement across the West. The history and identity of these contributing properties are intertwined with the dominant mining culture. Evidence of habitation includes features or artifact deposits indicative of a dwelling. Outlying elements are generally devoid of habitation features. There can be evidence of ancillary buildings or structures in the form of foundations or pads, but associated artifact deposits are sparse and task-specific, not representing prolonged or intensive habitation.

Water System Properties

This class of property represents a variety of water management systems. The 48 water system properties constitute 10 percent of all properties discovered, creating an impressive system of containment, distribution, and dewatering developed in conjunction with intensive placer and lode mining, milling, and settlement. These resources link various mining and settlement activities. They commonly occur within mining technology and community properties.

The most common water system property type is an engineered water-conveyance channel or ditch. These earthen features are typically 3 to 5 feet wide from berm to berm, with a stone-filled berm along the downslope edge. A ditch is part of a larger system that includes a catchment or diversion at the beginning, such as a dam, and an activity (like mining or milling) along its course or at the end. Some ditches represent only segments of systems that extend beyond the reach of the District. Dams in the Park consist of a barrier and/or impoundment constructed to hold or divert water. The dam component can be of earth or stone construction, and may have originally included wood elements.

Less common are penstock water conveyance lines. This property type consists of an alignment or segments of an enclosed conduit made of riveted metal for conducting water. Penstock is frequently a component of lode and placer operations, as well as an element of the more ubiquitous water-conveyance system, the ditch. District properties are composed of primarily penstock, buried or elevated, in an alignment that transcends distinct property boundaries. One penstock property, P-29-41, consists of the substantially intact remains of the water system put in place under the direction of William Bowers Bourn, Jr. in 1886 to replace steam power. The structure originated on Union Hill, passed through the Empire Mine, and exited the west side of the Park on its way to the North Star, which Bourn purchased in 1884, and then on to the Allison Ranch Mine, where the water was used a third time.

Drain portals consist of an opening, typically in the bottom of a ravine, designed to drain underground workings at higher elevations than the outlet. Drain outlets may still be open, such as the Magenta Drain (P-29-3670), or

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collapsed but identifiable as such. Because they are for draining mines and are not portals, substantial waste dumps or surface plant systems are generally absent.

Transportation Properties

This class of property consists of a network of transportation structures in the Historic District. The 67 transportation properties constitute 13 percent of all properties discovered, producing a complicated network of passageways developed in conjunction with the gold mining industry and settlement. Transportation resources articulate various mining and settlement processes, and they commonly occur as components of mining technology and community properties.

The diagnostic difference between rural and wagon roads, is width. A modern standard lane width in the U.S. is 12 feet, although some narrower roads continue to be used for automobile traffic. Rural roads in the Historic District consist of graded, two-track roadbeds ranging in surface width from 10 to 15 feet, and wider in a few cases; some have culverts. Rural roads represent the classic narrow country road that dominates the region's rural landscape. They do not typically incorporate stone masonry. Pavement is rare and not necessary for this classification. Wagon roads are also narrow, two-track alignments that range in surface width from 6 to 9 feet. Dry-laid stone-masonry components and/or an earthen berm along the downhill edge are classic wagon road components. The narrow width, stonework, and downhill berm all indicate 19th-century construction for wagons.

A single tramway property was identified in the Park, representing a narrow-gauge tramway grade alignment and associated features. This type of feature system is a common component of large lode mines, and often found associated with waste dumps. To be a distinct property, a tramway must not be limited to a single mining operation. The solitary tramway property discovered in the Historic District, P-29-3591, is located in the Osborne Hill area, originating at the substantial Prescott Hill Mine and Mill Complex (P-29-3729), and extending south, across the Sebastopol claim (P-29-3730), where it winds below the Betsy Mine (P-29-3727) before exiting the east side of the Park. The Sultana Gold Mining Company developed the Prescott Hill shaft from 1903 until 1916 and is responsible for constructing this tramway.

Prospecting Properties

This class of property consists of 222 prospects, constituting 45 percent of all properties discovered, scattered throughout the Park. These modest structures generally indicate lode exploration that did not lead to a developed mine. A gold mining prospect consists of one or more exploratory excavations, generally shallow in nature, isolated from any developed mining, and devoid of habitation evidence. Excavated material, typically quartz or other parent rock, has been piled around the prospect in most cases. The excavation comes in all shapes and sizes, from a cratered depression surrounded by mounded earth and/or rock to a linear trench excavated mechanically with a berm along one side.

Simple Properties

This relatively uncommon class includes: 6 fence lines; 8 monuments; 9 utility lines; 1 corral; and 1 orchard. The 25 simple properties in the District constitute 5 percent of all properties discovered, and reflect light land use and property demarcation. Historic-era boundaries include fence lines and monuments. Fence lines are structures consisting of post and wire alignments, with stone masonry along the base in some instances. Post and barbed-wire fence lines were common beginning in the 1870s, and many of the identified resources of this type align well with property boundaries evident on historic maps. Monuments consist of isolated survey or property markers that are fairly common in the Park, with 23 additional examples located within other property types. Monuments typically consist of an upright stake or post made from a pipe, tramway rail, or milled lumber, and in some cases fortified at the base with a stone cairn. Designations have been engraved or painted on many of the pipes driven into the ground. Utility line properties consist of various transmission lines stretching across the Park, most commonly for electricity and water, and possibly telegraph or telephone service as well. Electrical and other elevated types

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consist of wood utility poles—either standing or the stumps of cut-down poles on razed lines—that often occur with glass or ceramic insulators, wire, and/or other hardware; a series of high-voltage tower concrete footings extend into the Historic District from the west to the Cyanide Plant area of the Empire Mine. Crossbars and other elements fixed to trees provide further evidence of electricity transmission. Although electricity was generated in Nevada County during the late 19th century, it was not until the 20th century that it achieved widespread use. Rigid 1-inch ferrous pipe and 4-inch terra-cotta lines provide evidence for water delivery and drainage. The single corral property in the District is an enclosure for confining mules that worked in the mines. The orchard site consists of fruit and nut tree plantings, and their remains. While often elements of other property types, namely a homestead/ranch complex, both the corral and orchard properties are devoid of dwellings or other facilities.

Architecture

Ten resources in the District contain a total of 27 contributing architectural elements (see Table 3 and map on page 85). By far the most important is the Empire Mine and Mill Complex (P-29-1487), which hosts 17 contributing and 5 non-contributing architectural elements. Most of these elements are described in the original nomination. They are described here again grouped under the prevailing property in which they are located. Thorough assessments and photographs of these contributing elements are presented by Selverston (2009a).

Resource with Contributing Architecture (Primary; Trinomial)	No. Contributing Elements	Architectural Classification
1. Empire Mine and Mill Complex (P-29-1487; CA-NEV-967H)	17	Tudor Revival, Industrial, Shingle Style, Bungalow, Gothic Revival
2. Rowe Mine (P-29-3114; CA-NEV-1941H)	2	Industrial
3. Kendall Dwelling (P-29-3767; CA-NEV-1925H)	1	Vernacular Craftsman
4. Shingled Bungalow Dwelling (P-29-3097; CA-NEV-1927H)	1	Vernacular Craftsman
5. Shingled Craftsman Dwelling (P-29-3123; CA-NEV-1938H)	1	Craftsman / Bungalow
6. Cassidy Dwelling (P-29-3120; CA-NEV-1915H)	1	Gothic Revival
7. Nob Dwelling, Pine Porches (P-29-3110; CA-NEV-1940H)	1	Shingled Bungalow
8. Pennsylvania Mine and Mill (P-29-3116; CA-NEV-1911H)	1	Industrial
9. Dwelling (P-29-3118; CA-NEV-1942H)	1	Vernacular Bungalow
10. Dwelling (P-29-3807; CA-NEV-1966H)	1	Vernacular Shingle Style

1. Empire Mine and Mill Complex (P-29-1487; CA-NEV-967H)

The surviving architecture of this large gold mine site consists of 17 contributing and 5 non-contributing infrastructure elements. Most are individual buildings. All of them are listed below in the same order they were listed in the original nomination in order to avoid a confusing, overlapping sequence. The three non-contributing buildings are reconstructions of the blacksmith, tool shop, and compressor buildings integrated into the mineyard. While they enhance the historic character of the District and provide for recreation, they do not contribute to its historical significance. Resources that were itemized in the original nomination but have since been reclassified as part of other resources are cited and then described following the Empire Mine and Mill Complex series, along with new resources being added to the Historic District containing intact architecture. Previously listed resources discussed after the Empire mine proper are indicated below with parentheses, as is a single warehouse building that is no longer present.

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Architectural Element No. 1: The Bourn Cottage

This impressive English Manor is a two-story stone Tudor Revival residence, loosely based on a variety of late Medieval English prototypes, with a T-shaped mass. The residence faces southwest towards a vast expanse of lawn, formal gardens, pools, fountains, and ornamental plantings, accessed by a brick terrace surrounded by a low stone wall. Constructed of local granite, the "cottage" has a steeply pitched side gable roof with parapeted gables, overhanging eaves supported with brackets, and a façade dominated by a central cross gable and two gabled dormers. The parapeted gables, chimneys, and window and door surrounds are of brick, while the roof is clad in wood shingles. The primary entry is through a centrally located porch on the southwest façade, through an arched recessed doorway beneath the projecting front gable. The door is frame, with one light, and is constructed of vertical boards. The northwest elevation features two arched windows on the lower story, each with multiple sets of diamond-patterned leaded glass windows, while the upper story opening is rectangular, with a small frame porch supported with brackets. The southeast elevation features a screened porch, underneath the main roof, with a brick floor set in a herringbone pattern. Fenestration consists of diamond-patterned leaded glass casement windows. Large complex chimneys project from the roofs.

Two cross-gabled units project to the rear of the primary mass, one the two-story kitchen and servants' unit, and the other a one-story unit, with refrigeration and storage. The two-story unit features shed-roofed dormers and an arched brick entry with frame and screen doors. The one-story unit has three arched entries filled with paneled wood double doors, accessed by an arched stone entryway into the brick courtyard. Behind the house, stone walls line the driveway, while pathways to the formal walled gardens are located to the east.

The Bourn Cottage was designed by noted California architect Willis Polk and completed in 1897. It was erected during the period after William Bourn, Jr. regained the controlling interest in the mine and commissioned San Francisco architect Willis Polk to design better facilities. These included the "Bourn Cottage," Ophir Cottage, a clubhouse, stable block, elaborate gardens, and a mine office, assay, and refinery. Built as a summer residence for William B. Bourn, Jr. by his hunting companion Willis Polk, the "cottage" was designed by the men together to emulate an English country manor on the exterior, with a hunting lodge effect on the interior. It was used by the Bourns on occasion, primarily during the summer months.

Architectural Element No. 2: Empire Mine Manager's Office and Refinery

The mine manager's office and assay building consists of a complex of four linearly connected buildings, all constructed in the Tudor Revival style using waste rock from the mine and brick from Sacramento. Anchored by the office building on the west, the next building was the assay room, then the refinery, with the mine rescue building (erected after 1905) on the east end. The mine manager's office is two stories high, the refinery and mine rescue station one and one-half stories, and flank the one-story assay room. Constructed of local granite, 3 ft. thick and mortared with concrete, the buildings have side-gabled roofs with parapeted gables and overhanging eaves. The parapeted gables, chimneys, and window and door surrounds are of brick. The roofs are covered with wood shingles, except for the refinery, which is covered with corrugated metal. The interior walls of the offices are finished in hand-planed coastal redwood, the lower story walls painted in later years.

Public entry to the building is via the upper story of the north primary façade, up a wide brick stairway with stone railings capped with boulders, and through frame and glass double doors with sidelights. A steeply pitched gable dormer, in a projecting wing, is located on the east side of the primary façade of the office building. A small shingled bathroom porch, with gable roof, is located on the west second-story elevation. Fenestration in the office building consists of diamond-patterned leaded glass casement windows. The south rear of the building has a two-story frame porch on the southwest corner, supported with square wood posts, railings, and balusters; a stairway leads to the mineyard from the upper story offices. Primary entry to the office building from the mineyard is through a frame door with two recessed panels and two linear lights; other doors are constructed of vertical planks.

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The upstairs offices include those of mine superintendent George Starr and the mine manager; the business office at the front; a conference room (originally a bedroom), and a bathroom. Starr's office features a brick fireplace with redwood mantel and shelving supported with brackets; the walls are clad in 9-inch-wide vertical redwood boards. The bathroom has the original marble sink, pull-chain toilet, and steam radiator. The accountant's office and chart room are on the lower floor. A large safe (Herring-Hall-Marvin) is built into the concrete wall of the lower story hallway, opposite the offices, which are separated from the hallway by tongue-and-groove wainscoting and windows. Central to the chart room is a large map table with rollers on each side, so that large maps and charts could be rolled and unrolled to read specific sections. An enclosed interior stairway provides access between the two floors. All floors are finished in tongue-and-groove boards.

The other sections of the building, although of the same stone and brick construction, are much more utilitarian, with fenestration consisting of multi-light metal industrial sash, with central casement openings. The primary façade of the building faces north towards the driveway, while the rear faces the mineyard. A mortared stone fence separates the mineyard and the residential complex from East Empire Street. Double gates, hinged on stone posts, provide access to the mineyard between the west side of the office building and east side of the engineer's office.

The mine manager's office and assay building were designed by noted California architect Willis Polk and completed in 1899. They were erected during the period after George Starr returned as superintendent in 1898. Starr oversaw the renovation, modernization, and exploration program at the mine, which, in 1900, was described as a "showplace" in the *Mining and Scientific Press* (cited in Bohakel 1980:12). During Starr's era a cyanide plant was built, other mines were acquired, and the workings again refurbished in 1913–1914. Fred Nobs became mine manager in 1917, a post he held after the Empire was purchased by the Newmont Mining Company in 1929. Between 1899 and 1956, millions of dollars in gold passed through the building on its way to the U.S. Mint in San Francisco. Decisions made in the upstairs offices profoundly affected the local economy and shaped the history of bedrock mining in California.

Architectural Element No. 3: Clubhouse

The clubhouse is a frame one, two, and three-story building with an irregular mass constructed in Tudor Revival and Shingle styles. It has intersecting hip roofs covered in wood shingles, with an octagonal roof on the three-story tower, and skylights over the squash court. The building is anchored by the octagonal tower, with the game room on the lower story and guest bedrooms and baths above. The squash court was located in the northwest wing, the ballroom in the east wing, and a bowling alley attached to the south elevation. A square three-story section projects westerly from the mass, with recessed porches, supported by square wood posts, on the lower two stories. The bowling alley is open-sided, with a truss roof, while the original floor has been replaced with concrete. A badminton/croquet area and a tennis court were located east and north of the building.

The walls of the clubhouse are clad in wood shingles, affixed in an irregular pattern. Primary entry is via double doors, with diamond-patterned leaded glass above recessed panels. Fenestration consists primarily of casement windows, with diamond-patterned leaded glass, but some windows have 1/1 lights, double-hung. Shingled canopies project over some of the windows, providing shade to the interior. A massive Tudor fireplace chimney, with patterned brickwork, is located in the center of the structure. The ballroom features exposed trusses, a brick fireplace, the original chandeliers, and floors finished in tongue and groove boards.

The clubhouse was designed by noted California architect Willis Polk and completed ca. 1900. It was erected during the period after George Starr returned as superintendent in 1898. Starr oversaw the renovation, modernization, and exploration program at the mine, while W. B. Bourn, Jr. commissioned San Francisco architect Willis Polk to design new facilities on the property. The clubhouse provided the mine superintendent and manager with comfortable and luxurious recreation facilities. In addition, the elegant accommodations were used to entertain important visitors and guests, for both business and personal interests. Famous mining experts and engineers, including Herbert Hoover, enjoyed stays at the clubhouse. The Empire Country Club, founded in 1915,

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held twice-monthly social events in the building, including billiards, cards, tennis, squash, bowling, and other activities.

Architectural Element No. 4: Engineering Building

The engineer's office, model room, and core storage building complex consists of three connected buildings, attached to the southeast end of the Willis Polk-designed stable block. The two-story stone and brick Tudor Revival stable is located northwest of the 1938 U-shaped frame-and-stucco engineer's office/model room complex. A small, shingled structure connects the west end of the office/model room complex to the southeast end of the stable block; together they form an obtuse angle.

The engineer's office and model room, which face south, comprise a U-shaped frame building with intersecting gable roofs covered with corrugated metal. The easternmost section has a front gable roof, a frame pedestrian door with four recessed panels, and multi-light industrial metal casement windows. The central part of the building, with an east/west-oriented end gable roof, features three frame pedestrian doors and three 1/1-light frame sash windows, double-hung. The model room, to the west, has a low-pitched front-gable roof with a series of wide 1/1-light frame sash, double-hung, and painted-over for secrecy. Frame double doors provide access to the model room from the east. A vault extends from the north rear wall of the east end of the building. The walls of all sections are clad in stucco and the foundation is concrete.

The core storage building is frame, with roof and walls clad in corrugated metal. A full-width shed-roofed porch is attached to the west elevation and supported by square wood posts. The interior of the building has a series of wood shelves where the sample cores were stored. A small frame building, with a gable roof and walls covered with wood shingles, extends westerly from the stable block in the angle between the stable/carriage house and the engineer's office/model room complexes. A stone wall, topped with boulders and anchored by a stone corner post, encloses the yard on the south side of the junction of the two complexes.

The engineer's office and model room were constructed by the Newmont Mining Company, under the direction of Fred Nobs, as offices for their engineer and to house the scale model of the underground workings for the use by the engineers. The central portion of the building was used for the engineer's and mine manager's map room, while the easternmost section housed the large rolled map that corresponded to the mine model.

Architectural Element No. 5: Machine Shop

The machine shop/carpenter shop is a one-and-one-half-story post-and-beam Industrial Style building with a side-gable roof covered with corrugated metal. Two large frame doors, which swing outward, are located on the primary north elevation and allowed for large equipment to be moved in and out of the building. A shed-roofed extension projects to the north and contains a pedestrian door (frame with five cross-panels) and a series of windows. Fenestration in the building consists of 6/6 light frame sash, double-hung; individual, paired, and tripled. The lower portion of the north wall has a stone foundation, 2 ft. wide and 3 ft. high. The remainder of the building has a board-formed concrete foundation. Flooring is of 2 × 12-inch boards. Adjoining the larger building to the north are two connected buildings with lower gable roofs that housed the mine shaft portal. Although the headframe is no longer extant, the guide rails for the skip are extant, as is the collar, incline shaft, rails, and cribbing. The concrete footings for the headframe are located east of the buildings.

The shop building and shaft collar were apparently constructed ca. 1900 after George Starr returned as superintendent in 1898. Starr oversaw the renovation, modernization, and exploration program at the mine, which, in 1900, was described as a "showplace" in the *Mining and Scientific Press* (cited in Bohakel 1980:12). During this era a cyanide plant was built, other mines were acquired, and the workings were again refurbished in 1913–1914. Mine machinery and drills were repaired in the machine shop, and other equipment designed and built. Mr. Hooper was the master machinist from 1900 to 1917, while Phil Keast was employed as an apprentice and worked his way up to master machinist; a position he held until the mine closed in 1957. The dry room, where men changed clothes when entering and exiting the mine, was located near the shaft, but moved to another building after a fire.

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Architectural Element (No. 6): Warehouse

The circa 1948 warehouse listed in the original nomination is no longer standing.

Architectural Element No. 7: Hoist House

The Industrial Style hoist house is a one-and-one-half-story post-and-beam frame building with a side gable roof. The roof and walls are clad in corrugated metal. The floor is of 2 × 12-inch boards (replaced by Park restoration crews), and the building has a perimeter foundation of board-formed concrete. The building has two pedestrian access doors: the one on the east is through a small enclosed porch with a front gable roof and an Eastlake door with three panels and multi-lights; the one on the west is through a vertical board door beneath a gable-roofed portico supported by knee braces. Double doors, of vertical boards affixed with large strap hinges, are located on the east side of the north elevation and provide equipment access. Fenestration consists of 6/6 light frame sash, double-hung, which provide light to the interior on all sides. A double-drum electric hoist is located in the building, which is lit by a series of metal barn lights. A headframe was once located east of the hoist house, and west of the transformer house; it is no longer extant. A steel headframe, with sheave wheel and stairway, is located west of the hoist house and east of the compressor house.

The hoist house was apparently constructed ca. 1900 after George Starr returned as superintendent in 1898. Starr oversaw the renovation, modernization, and exploration program at the mine, which, in 1900, was described as a “showplace” in the *Mining and Scientific Press* (cited in Bohakel 1980:12). During this era a cyanide plant was built, other mines were acquired, and the workings were again refurbished in 1913–1914. The hoisting machinery—drums, dials, and levers—was housed and operated from the building, and all transportation in and out of the mine was controlled from this point.

Architectural Element No. 8: Transformer House

The Industrial Style transformer house at the Empire Mine is a simple one-story frame building with a rectangular mass. The small structure is outside the enclosed mineyard, south of the hoist house, and west of the ruins of a backup generator. It has a front gable roof with an open gable end and exposed rafter tails. A corrugated metal ventilator, with a gable roof, is centered on the roof. The entry is via a door, also of corrugated metal, in the primary north elevation; signage states “High Voltage Dangerous.” Fenestration consists of 6/6 light frame sash, double hung, one each on the north and south elevations. The foundation and floor are of concrete construction. The transformer house was apparently built ca. 1900 when the mine and mill were renovated and modernized, although it may have been built or upgraded during the 1913–1914 refurbishment. It is not shown on a 1912 fire insurance map (Sanborn Map Company 1912).

Architectural Element (No. 9): Rowe Shaft Headframe and Ore Bins

The tall surviving headframe and ore bins of the Rowe Shaft are encompassed by the Rowe Mine site (P-29-3114) and described under that property below following the Empire Mine and Mill Complex series.

Architectural Element No. 10: Mine Office Maintenance Garage

The maintenance garage is a one-story frame building with a side-gabled roof covered with wood shingles in the Shingle Style. The roof features exposed rafters and returns in the gable ends. The walls are clad in wood shingles, affixed in an irregular pattern, and the floor and foundation are concrete. Pedestrian doors provide access to the north and south elevations, while three sliding vehicular doors are located on the west primary façade; all doors are constructed of vertical boards. A ribbon row of fixed 6-light frame windows provides light to the interior from the east elevation, while frame casement windows are located in the north and south walls. A gasoline pump is located near the southwest corner, and a vehicular lift on the north side.

The maintenance garage was designed by noted California architect Willis Polk and completed in 1899. It was erected during the period after George Starr returned as superintendent in 1898.

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Architectural Element No. 11: Core / Lime Shed

The lime shed above the massive cyanide plant ruins is a simple frame Industrial Style building with a rectangular mass. Core samples are now present in the building, but their storage was not the building's primary use. It has a front gable roof covered with corrugated metal. The walls are also clad in corrugated metal, as is the sliding door on the southeast side, near the east corner of the building. Situated on a hillside, the upper part of the building, on the northeast elevation, is accessed at ground level by a 20-foot-long frame ramp that leads to a frame door. The southwest elevation is stories high, with doors on each story, and faces the cyanide plant ruins. A frame door is located on the northeast gable end near the north corner. Fenestration consists of 6/6 light frame sash, double-hung, and badly deteriorated. The foundation is post-on-pier. The lime shed was apparently built in 1910 when the cyanide plant was erected, although not shown on a 1912 fire insurance map. It was possibly added in the 1913 or 1919 upgrades.

Architectural Element No. 12: Carriage House Complex

This complex consists of a stone and brick Tudor Revival building attached to a more recently constructed engineer's office. The carriage house, stables, groom's quarters, and later addition form an irregularly shaped mass. The stone section of the stable block complex is one and one-half stories high, with a gable roof and a wide V-shaped mass. The parapeted gables, windows, and door surrounds are of brick, and the windows are frame casements with diamond-patterned leaded glass. A parapeted dormer faces northwest. The carriage house, stables, and groom's cottage consist of a U-shaped frame building with front and cross-gabled roofs covered with wood shingles. The primary façade faces west towards what was originally the stable yard. All the walls are clad in wood shingles, affixed in an irregular pattern, and the foundations are stone.

The carriage house is in the center of the U, with a side gable roof with a front cross gable. The interior is accessed by double doors constructed of vertical V-rustic boards on a metal track. Flooring consists of a mixture of concrete and 2 × 12-inch boards. It was later converted for automobile maintenance and is now used for a film and video viewing theatre.

The original stables, now the long south arm of the U, has been converted for use as a visitor center. It has a front gable roof with extended eaves, exposed rafter tails, and returns on the gable end. A stairway and handicapped ramp have been added to its north side elevation. A stone-fenced corral is located on the south side of the stable.

The groom's quarters are located in the northern arm of the U, and have a steeply pitched front gable roof with extended eaves, exposed rafter tails, and returns on the gable end. Fenestration consists of frame leaded glass casement windows in a diamond pattern. Primary access is via a frame door on the south elevation. The interior is original, with walls finished with beaded vertical tongue-and-groove boards, doors of wide vertical boards, and flooring of tongue-and-groove boards. The cottage has a living room, kitchen, bedroom, and bath, and a room now used as an office.

The building housing the carriage house, stable block, corral, and groom's quarters was designed by noted California architect Willis Polk and completed in 1899 after George Starr returned as superintendent in 1898.

Architectural Element No. 13: Conservatory

This complex consists of a frame gardener's dwelling and attached frame and glass conservatory. The residence is a simple one-story frame building with an L-shaped mass in a Shingled Bungalow style. The building has a cross-gable roof with exposed rafter tails, a louvre in the gable end, and is covered with wood shingles. Walls of the dwelling and southerly portion of the conservatory are clad in wood shingles, affixed in an irregular pattern. Primary entry to the dwelling is via a frame door, with two cross panels and one light, on the primary southwest façade. Another door, with six lights and two recessed panels, provides entry from the northwest side of the L, near the junction with the conservatory's southwest wall. Fenestration consists of 1/1 light frame sash, double-hung. A stone fireplace chimney, mortared with concrete, is located on the east elevation, and the building has a concrete

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perimeter foundation. The dwelling is attached to the conservatory by a frame side-gabled portion of the gardener's workplace. Double frame doors, with six lights over two recessed panels, located beneath a central cross gable, provide access to this section. The conservatory is a long rectangular structure with a stone foundation and partial walls. It has a side-gabled roof with a cross-gabled entryway on the primary southwest façade, through a French door with 10 lights. The building is constructed of glass lights supported with wood framing, and has an earthen floor and frame workbenches. A brick pathway, in herringbone pattern, leads directly to the primary entry. Other pathways of concrete and gravel are located to the front of the buildings and lead northwesterly to formal gardens behind the Bourn Cottage.

The gardener's dwelling and conservatory were designed by noted California architect Willis Polk and completed in 1899. The head gardener for the estate resided in the dwelling, from where he oversaw a crew of gardeners who maintained the grounds. The conservatory was well-established prior to 1910, when its nursery provided plants not only for the Empire property, but also for Filoli, Bourn's Woodside estate, and Golden Gate Park in San Francisco.

Architectural Element No. 14: George Sing Oyung Residence

The Sing/Oyung (O'Yung) residential complex consists of the cottage, garage/shed, wood shed, and two chicken houses. The one-story frame house has been cobbled together from several structures and time periods. The original structure appears to be the simple one-story frame cottage with front gable roof, exposed rafter tails, and roofed with corrugated metal. The walls are clad in vertical board-and-batten siding, and the foundation is post on rock. Fenestration on this section is 6/6 light frame sash, double-hung. A brick and metal chimney protrudes from the center of the structure. An addition on the southeast corner was a section from the George Starr home, moved to the site after Starr's residence burned in 1934. This section in the National Folk adaptation of the Gothic Revival Style has a hipped roof, wood shingle siding, and 6/6 light frame sash, double-hung. Another gable-roofed board-and-batten structure was added to the rear of the building, with a connecting section clad in corrugated metal. A porch and stoop provided access to the rear northwest corner of the building. Primary entry is via a frame door, with three cross-panels and one light, from the shed-roofed porch on the front of the original dwelling, into the central section between the original structure and the Starr addition. Philip Oyung recalled that three small rooms were constructed below the cabin in the basement area to store a hot water tank and other sundries, provide a dark room for photographic developing, and to provide a place to build small models. The dwelling is located south of the driveway, in a yard with ivy, shrubbery, and loquat, fig, plum, and other trees.

A single-car frame garage is located to the north of the house. It has a moderately pitched front-gable roof with a shed-roofed addition on the west side. The roof and walls are clad in corrugated metal, and the floor is earthen. Double doors of corrugated metal, affixed with strap hinges, provide entry to each section. A small, open, shed-roofed addition is attached to the side. A frame woodshed is located to the west rear of the dwelling. It has a shed roof, and three separate compartments with open doorways. The roof and walls are clad in corrugated metal and the floor is a mixture of earth and wood. The building is in a deteriorated condition, and covered with ivy. Two frame chicken houses are located in the south rear of the residence. No. 1 chicken house is a small frame one-story structure with corrugated metal gable roof, board and batten siding, and window openings covered with chicken wire. Chicken house No. 2 is a small one-story structure with corrugated metal shed roof, board and batten siding, and window openings covered with chicken wire. Philip Oyung recalled two more chicken houses were located about 125 feet east of the cabin and within 10 feet north of a series of redwood tanks associated with processing mill tailings, as well as a small wire fenced goat yard in the same vicinity. These two chicken houses and goat yard were replaced with a well and pumping station by Park personnel.

This dwelling, located on the Empire Mine Claim, was the long-time residence of the Sing/Oyung family. Fu Sing O Yung was the first Chinese gardener for George Starr, and the original occupant. The original section of the residence appears to have been constructed ca. 1913, apparently after son George Sing O Yung (Oyung) and wife emigrated to the U.S. that year. George succeeded his father as gardener and general handyman at the mine in

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1919, a position he held until it closed; he was then hired by State Parks after it acquired the property in 1975. He relocated to across Empire Street from the mine around this time. Six sons were born to the family, including Philip, who worked as an electrician at the mine while in school. In addition to gardening for the Empire Mine, the family raised chickens, rabbits, goats, and vegetables for themselves and others. Fu Sing O Yung returned to China, but his wife, Gum Ching (1872–1966) remained in Grass Valley. George Sing Oyung died in Grass Valley in 1991, having been employed by the Empire Mine for all of his working years. His death record noted that he was born August 25, 1903, in China, and that his father's name was Sing and mother's Gum. Susie (Choy) died in Sunnyvale in 2002.

Architectural Element (No. 15): Residence No. 1 – Kendall Residence

The original nomination lists five residences numbered out of sequence, as shown below, in addition to the Bourn Cottage and Oyung Residence already described above.

Kendall's House is encompassed by the Kendall Dwelling site (P-29-3767) and is described under that property below.

Architectural Element (No. 16): Residence No. 2 – Shingled Bungalow

This residence is encompassed by the Shingled Bungalow Dwelling site (P-29-3097) and is described under that property below.

Architectural Element No. 17: Residence No. 4 – Hooper Residence

The Hooper residential complex consists of the Frank Hooper dwelling, a garage, and a shed. The house is a one and one-half story frame building with a steeply pitched front gable roof with boxed eaves and covered with wood shingles. It is a fine example of a National Folk House of the front-gable family; a simple vernacular adaptation of the Gothic Revival Style. The walls are clad in wood shingles, in an irregular pattern, with fishscale- and diamond-patterned shingles in the gable end. The house has a full-width front porch which wraps around both sides; the east side has been enclosed and its walls are clad in horizontal board V-Rustic siding. The front entrance is from the porch, via French doors which replaced the original. The porch floor is finished in the original tongue and groove, while the posts and railing are replacements. A French door from the west elevation porch provides entry to the rear of the residence. Original fenestration consists of 2/2 light frame sash, double-hung, with a pointed arched window in the gable end. Windows on the enclosed east porch are multi-light tri-partite steel casement. The residence faces north towards the driveway, in a yard with a lawn, ornamental shrubbery and flowers, and stone retaining walls.

A single-car frame garage is located to the west of the house. It has a moderately pitched front-gable roof with a shed-roofed carport extension on the east side. The roof and walls are clad in corrugated metal, and the floor is of 2 × 12-inch boards, with a service pit. Fenestration consists of fixed 6-light frame sash on the side and rear walls. A small frame shed is located south of the garage. It has a steeply pitched gable roof, covered with corrugated metal. The walls are also clad in corrugated metal and the structure has a rock foundation. Entry is via a frame door with five cross-panels, set in the front elevation.

This dwelling, located on the Empire Mine Claim, was evidently one of the early residences of Francis/Frank Hooper and/or his brother Albert E. Hooper. Both Hoopers were the sons of Thomas and Elizabeth Hooper, natives of Cornwall, England, who immigrated to Grass Valley about 1870, where Thomas worked as a miner. Based on the census data for 1900, Frank, his wife Lily, and children were residing in the home, rented from the mining company. Frank was working as a carpenter. In 1910 Frank was residing on Bennett Street and working as a foreman in a gold mill (Empire Mine). In 1920 he was at the same residence and a "millman," the same occupation he had in 1930 when residing on Colfax Avenue (U.S. Census 1900, 1910, 1920, 1930). Frank was superintendent of the mill at the Empire Mine in the early 1930s, when he became salivated with mercury poisoning, but recovered (Curry 1990). He died in Alameda in 1959. Who resided at the dwelling before Hooper isn't known. The house dates to circa 1895, and may be older. After ca. 1917, the residence was occupied by other mine employees.

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Architectural Element (No. 18): Residence No. 6 – Shingled Craftsman Dwelling

This residence is encompassed by the Shingled Craftsman Dwelling site (P-29-3123; CA-NEV-1938H) and is described under that property below.

Architectural Element (No. 19): Residence No. 7 – Cassidy House

This residence is encompassed by the Cassidy Dwelling site (P-29-3120; CA-NEV-1915H) and is described under that property below.

Architectural Element No. 20: Cottage Grounds

Not described in the original nomination, the formal English gardens were also designed by noted San Francisco architect Willis Polk to complement the Tudor English Manor style of the Bourn Cottage, Ophir Cottage, clubhouse, stable block, and other facilities. The gardens feature expansive lawns, brick and gravel pathways, boxwood hedges, a formal terraced rose garden behind the house, and water features. Facing southwest from the primary façade of the residence, a terraced lawn has two circular fountains, flanking a formal brick terraced waterfall to a large reflecting pool at the bottom. Italian cypress trees line the waterfall feature, while a lily pond with a stone wall, niches, and urns, form one terrace. Large urns filled with flowers accent stairways and niches, while separate small brick and stone garden areas provide privacy for reflection. Less dramatic landscaping extends every direction for hundreds of feet. Perennial and annual flowerbeds are located throughout the residential grounds, and a wide *allée* lined with ornamental trees served as a grand entrance to the estate. There was an immense swimming pond near the clubhouse that is now drained.

The gardens were planned and planted in the late 1890s and early 1900s. Additional landscaping and plantings were done by the Park based on the original design plans.

Architectural Element No. 21: George Starr Garage

Not described in the original nomination, the Starr garage is a one-story frame building with a side-gabled roof covered with wood shingles designed by Polk in later years, circa 1916. It does not match well with the earlier Polk styles at Empire Mine. The walls are clad in wood shingles, affixed in an irregular pattern, and the floor and foundation are concrete. Three sets of hinged double doors, constructed of vertical tongue-and-groove boards, provide vehicular access to the primary south façade. One fixed six-light frame window is located on the west gable end. A small pony stall with corrugated metal roof is located on the east elevation.

The garage was erected during the period after George Starr returned as superintendent. Starr's residence, the Ophir Cottage, a smaller frame version of the Bourn Cottage, was erected in 1916, but burned in 1935 and the family moved to San Francisco. The garage was built to house Starr's vehicles, with an attached shed for his children's pony.

Architectural Element No. 22: Cyanide Plant Transformer House

Not described in the original nomination, the Industrial Style transformer house at the cyanide plant is a simple frame one-story building with a rectangular mass. It has a front gable roof with a louvre in the gable end and exposed rafter tails. The roof and walls are clad in corrugated metal, as is the door on the northeast end. Fenestration consists of 6/6 light frame sash, double-hung. The foundation and floor are of concrete construction.

The transformer house was apparently built in 1910 when the cyanide plant was erected; the electrical transformers were removed many years ago.

Architectural Element No. 23: Pump House

Not described in the original nomination, the Industrial Style pump house is a small frame building with a corrugated metal front gable roof and walls. The pump house was apparently built ca. 1899 when the present configuration of residential structures was erected. It has not been in use for many years. A meter box and weather head are located on an electric pole in the front of the structure. Access is via a frame door with five cross panels on the primary south elevation. The pump once provided water from the adjacent pond to the Empire residential area.

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2. Rowe Mine (P-29-3114; CA-NEV-1941H)

Architectural Element (No. 9): Rowe Shaft Headframe

The Rowe Shaft was opened up at the Empire Mine in 1947 as an alternate escape route in case of emergency, as well as for mining use. It was named for William C. "Lamar" Rowe (1872–1944), a long-time underground mining superintendent at the Empire. The tall intact Industrial Style lumber headframe is the only complete head frame still standing in the District, although it has become unstable. This structure is a wood headframe with concrete foundation footers. The superstructure is constructed of 12 × 12-inch timbers, gusseted with steel plates. Within the structure are wood ore bins and chutes. Ore car track runs to the top, where two sheaves (wheels) are located. A metal pipe rail runs up both sides and across the top. Although the headframe could not be closely inspected because of security fencing, it appears to be of the four-post derrick type. The headframe is deteriorated and in poor condition. The massive Rowe Mine waste dump surrounds the downslope side.

Architectural Element No. 24: Rowe Mine Ore Bins

A conveyor belt, now absent, carried ore upslope from the headframe to the intact Industrial Style poured concrete bins standing nearby. This large structure consists of a tripartite set of slope-floor ore bins. The bins are constructed of 2 × 6-inch boards laid flat, so that the walls are 6-inches thick. The superstructure is of iron pipe rails and corrugated metal, with a corrugated metal gable roof. Three truck stalls, constructed of board-formed reinforced concrete, are situated beneath the bins; each has a trip mechanism designed to dump the ore into the trucks as they were backed in. The ore bins are in fair condition. Ore was collected by truck and transported a short distance to the Empire stamp mill. The head frame and bins have not been used since 1956.

3. Kendall Dwelling (P-29-3767; CA-NEV-1925H)

Architectural Element (No. 15): Residence No. 1 – Kendall Residence

Included with the original nomination, Kendall's House is encompassed by the Kendall Dwelling site (P-29-3767). The resource consists of an architectural complex consisting of four frame buildings all built in 1934 by Art Kendall, an engineer for the Empire Mines, and Johannsen: a residence, guest cottage, garage, and woodshed. Johannsen and Kendall not only crafted the woodwork, but also the metal work and fixtures. It appears to have undergone no alterations except for the rear addition of a laundry room. In addition, the complex includes two fences, two rock alignments, and a concrete foundation. The complex is surrounded with an unmortared stone fence, lawns, native trees, shrubbery, and ornamental plantings.

The Vernacular Craftsman residence is a one and one-half story building with an irregular mass, a cross-gable roof, and a shed-roofed addition. The roof is covered with composition shingles and has overhanging eaves, exposed rafter tails, and triangular knee braces in the gable ends. The walls are clad in manufactured log siding, with vertical board and board and batten siding in the gable ends. The core of the house is side-gabled and has a long shed-roofed dormer with two sets of four windows. A front-gabled room projects from the primary west façade, with a partial-width porch located on the remainder. The shed-roofed porch is supported with four square wood posts and knee braces. A cross-gabled kitchen section is located on the rear elevation, with a shed-roofed laundry addition. A concrete stairway provides access to a concrete patio on the front of the house; the steps are lined with mortared stones, as is the patio retaining wall. Primary entry is via a wood hand crafted door of vertical manufactured logs, with a peephole grille and thumbblatch hardware. Another exterior door is constructed of three thick boards affixed with horizontal bands of metal strapping and bolts. Original hardware consists of a hand-crafted doorknob and keyhole and a circular ring. The Dutch door to the side concrete patio is also hand-crafted, of two thick wood boards with wood cross-bands. The door has a thumbblatch. Fenestration consists of multi-light frame Craftsman-style casement windows with one large light surrounded with smaller and narrower lights, in sets of two, three, or four, in a ribboned pattern. A stone chimney and fireplace, mortared with concrete, are located on the south elevation. Interior walls are of vertical board tongue in groove knotty pine, while the truss roof is exposed to the upper story. Hand-crafted elements include stair and balcony railings, built-in window seats and

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bookcases, doors, hardware, and lighting fixtures (including chandeliers, newel post fixture, and interior and exterior wall brackets).

A rectangular frame guest cottage is located to the east of the residence. It has a steeply-pitched front gable roof, exposed rafter tails, and is covered with composition shingles. A central front-gabled portico supported with triangular knee braces provides entry to the primary west façade from a small porch and wood steps. The walls are clad in manufactured log siding, and the gable ends in vertical board and batten siding. The entry door is knotty pine, and fenestration consists of individual frame six-light sash windows.

A frame garage is located to the south rear of the residence. It has a front gable roof with a shed-roofed bay to the southwest and a shed-roofed addition to the rear. The roof is covered with wood shingles. The walls are clad in manufactured log siding, with vertical board and batten in the gable ends. The foundation is post on concrete pier. The gabled section features a sliding garage door, with a large pedestrian door on the shed section. Fenestration consists of single-light frame sash on the rear addition.

The woodshed, located to the south of the residence and north of the garage, is a small rectangular frame structure with a front gable roof covered with corrugated metal. The walls are clad in manufactured log siding, and the foundation is post on concrete pier. Doors of vertical manufactured log siding are located on the primary northwest and southeast elevations. There are no windows in the building.

4. Shingled Bungalow Dwelling (P-29-3097; CA-NEV-1927H)

Architectural Element (No. 16): Residence No. 2 – Shingled Bungalow Residence

Included with the original nomination, this is a one and one-half story frame dwelling with an L-shaped mass. It is in the cross-gabled Craftsman family, a Vernacular Craftsman Style popular in California in the early 1900s. The steeply-pitched roof is cross-gabled, covered with wood shingles, and has exposed rafter tails. The walls are clad in wood shingles, with vertical louvres in the gable ends. A shed-roofed addition is located on the northeast elevation. A partial-width shed-roofed porch is located on the primary northwest elevation and supported with square wood posts with wood railing and vertical balusters. Primary entry is via a frame door, with three cross panels and one light, from the front porch. A small shed-roofed porch provides access to the rear elevation; entry is via the same type door as the front. Original fenestration consists of 6-light, with 6/1 light frame sash on the rear elevation, while that on the addition is 1/1 light frame sash, double-hung. An exterior brick chimney is located on the southwest side elevation and another in the center of the house. The residence has a concrete foundation, concrete porch steps, concrete pathways, and is surrounded by a lawn. A frame shed, extant about 50 ft. northeast of the dwelling in 1982, has been demolished.

The original occupant of the dwelling is unknown, but it was situated on or near the line between the Tilden Consolidated Quartz Mine Claim, located and recorded in 1898 for W.B. Bourn, and the O.K. Quartz Mine. No residence was depicted on the site in 1896, and it appears to have been constructed ca. 1905, after its purchase by the Empire Mine. It was undoubtedly occupied by one of its employees, as several quartz miners were listed as residing along Empire Street and Colfax Avenue in 1910

5. Shingled Craftsman Dwelling (P-29-3123; CA-NEV-1938H)

Architectural Element (No. 18): Residence No. 6 – Shingled Craftsman Residence

Included with the original nomination, this architectural complex consists of four structures: a simple Craftsman Bungalow Style residence, utility shed, and open garage/woodshed, as well as the transformer building for the Cassidy Mine. The residence is a simple one-story frame dwelling with a medium-pitched side-gabled roof covered with corrugated metal, a style popular in Northern California in the 1910s and 1920s. The eaves feature knee braces, corrugated metal siding, and fixed 6-light frame windows. The walls are clad in wood shingles, and the house has a concrete perimeter foundation. A full-width enclosed shed-roofed porch is located on the primary east façade, while two shed-roofed additions are located on the rear elevation. The porch has a concrete floor, while flooring in

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the house is wood. Primary entry is via a frame door to the porch; the door has two recessed panels and six lights. Aluminum sliding doors provide access to the rear of the house, via a deck which was under construction at the time of recordation. Original fenestration consists of 1/1 light frame sash, double-hung, except for 9-light frame sash in the enclosed porch. The earlier rear addition has 2/2 light frame sash, while the newer has aluminum sliders. A brick chimney protrudes from the roof.

A frame shed with a front-gabled roof covered with corrugated metal over wood shingles, is located south of the residence. The walls are clad in vertical board and batten siding and the building has a post on concrete pier foundation. Entry is provided via a board and batten door on the east elevation, while fenestration consists of fixed 6-light and one-light frame sash. A recently constructed post-1982 frame post and beam garage/woodshed has two bays, a corrugated front gable roof, earthen floor, and open sides.

The Cassidy Mine Transformer House is a simple one-story rectangular frame building with a front-gable roof with exposed rafters. The roof and walls are clad in corrugated metal, as is the pedestrian door on the south primary elevation. Fenestration consists of fixed 6-light frame sash windows. The floor is earthen and the transformer has been removed.

Situated on the Cassidy Consolidated Quartz Mine claim, surveyed in 1877 for Felix Cassidy, the residence was constructed ca. 1915, about the time the claim was acquired by the Empire Mines. It was undoubtedly occupied by one of its employees, as several quartz miners were listed as residing along Empire Street in 1910.

Although associated with the Cassidy Mine, the Transformer House appears to have been constructed around the same period as the residence, probably around 1915 when the Cassidy Mine was being worked by the Linden Mining Company who installed electric pumps at that time, or shortly thereafter when acquired by the Empire Mines.

6. Cassidy Dwelling (P-29-3120; CA-NEV-1915H)

Architectural Element (No. 9): Residence No. 7 – Cassidy House

Included with the original nomination, this resource consists of a dwelling complex composed of the circa 1870s Felix Cassidy house, guest cottage, garden shed, carriage shed/garage, recently collapsed barn, artifact deposits, and a small flat with building debris. Ornamental plantings observed include cherry, holly, box wood, mock orange, hydrangea, Vinca Major, St. John's Wort, daylilies, fox glove, camellia, various bulbs, and a lawn.

The Cassidy house is a one and one-half story frame building with a steeply-pitched front gable roof covered with composition shingles in the front-gable family of the National Folk House tradition, a simple vernacular adaptation of the Gothic Revival Style. The walls are clad in horizontal board California Rustic Siding, affixed with cut nails. The original full-width front porch, supported with chamfered posts, wraps around the east side of the dwelling, but was enclosed in later years. The porch ceiling is finished in tongue and groove paneling, the floor is modern wood, and the railing is faced with modern lattice work. Several additions have been made to the rear of the house, including two hipped-roof sections and a shed-roofed enclosed rear porch. Primary entry is via a frame door with four recessed panels, the upper two arched, on the north façade. The entry features a transom with one light, and the original frame screen door. Another entry, via French doors with three lights each, is located on the enclosed north side porch. Entry to the side porch is via a frame door beneath a Craftsman-style gable-roofed portico supported by knee braces. Original fenestration consists of 2/2 light frame sash, double-hung; fenestration on the east porch consists of 6/6 light frame sash, double-hung. A rectangular louvre pierces the gable ends. A modern brick and stone chimney and fireplace are located on the west elevation, while an older brick chimney vents the kitchen stove. Interior floors are finished with oak and walnut. The front foundation is stone, with the remainder post on pier, or modern concrete; all are skirted with vertical board and batten siding. A brick pathway leads to the front entry, while concrete pathways surround the house.

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A two-story garden shed with a front gable roof is located to the south of the residence. Access on the upper story is via a frame and lattice door. The lower story, which faces the concrete patio and barbecue to the rear of the house, has a gable-roofed addition featuring a set of drawers flanked by narrow Craftsman windows with four lights above one narrow light. The walls are clad in horizontal board California Rustic siding, affixed with wire nails. The foundation is post on old concrete piers.

The guest cottage is a frame one-story dwelling with a low-pitched side-gable roof with exposed rafters. The primary façade features a partial-width recessed porch supported with square wood posts. The walls are clad in vertical tongue and groove siding, and the foundation is post on concrete pier. Entry is via a frame glass and panel door from the porch. Fenestration consists of six-light frame sash, which swing inward. Interior walls are finished with beaded tongue and groove, and the floors are tongue and groove. The porch has a concrete floor and a concrete pathway leads to the entry.

A carriage shed, now used as a garage is located to the south of the residence. The building has a side-gabled truss roof covered with corrugated metal over the original wood shakes. Framing is post and beam, and the walls are clad in vertical board and batten siding, affixed with wire nails. The north front has two compartments, one double wide for carriages or wagons, and the other narrow and now used as a woodshed. Fenestration consists of 6-light frame sash, and a board and batten pedestrian door provides access to the rear of the building. The floor in the carriage section is of 12-inch wide boards, rough sawn, while the woodshed has an earthen floor.

A collapsed frame barn is located to the west of the residence, it had a corrugated metal gable roof, board and batten siding and doors, and openings with no windows.

The residence was built for Felix Cassidy and his wife Ellen/Nellie in the mid-1870s, and the sheds, carriage house, barn, and guest cottage over the ensuing years. Felix claimed the Cassidy Consolidated Quartz Mine, composed of the O'Connor and Gilroy locations, in the 1870s. In 1877 he commissioned a mineral survey for his 24-acre lode mine, located west of the Empire Mine. His home and family garden, to the west of the house, were depicted on the plat. In 1880 the Michigan-born 41-year old miner was living there with his wife and five children, and is listed in Grass Valley with his wife in 1870 as well. The family continued to reside in the home through the 1910s, and, after his death, Ellen and her children, Pierce and Nellie, remained in the house as late as 1920. The east porch was enclosed in the 1920s or 1930s, and several additions have been made to the rear of the residence. A brick and stone chimney and fireplace were also added, possibly in the 1930s also.

7. Nob Dwelling (P-29-3110; CA-NEV-1940H)

Architectural Element No. 25: Pine Porches

This Shingled Bungalow Style dwelling complex is located on land incorporated into the Empire Mine Historic Park since the original national register nomination. The dwelling is a one and one-half story frame dwelling with a square mass is a dominant resource at this site. It measures 70 ft. long × 50 ft. wide. It has a hipped roof and shed-roofed dormers covered with wood shingles. The walls are clad in wood shingles, and the foundation is concrete, with a basement. The residence was built on the grounds of the Empire Mine, but moved in 1915-1916 to its present site. When situated near the mine, the building had open porches on all four sides, but the porch on the northwest rear elevation was later enclosed with a row of ribboned 6-light frame sash windows. The open porch on the southeast primary elevation is supported with square wood posts and a railing with square balusters; the floor is finished in tongue and groove. Primary entry is via a vertical board door on the southwest corner. French doors provide access to the southwest elevation, while another exterior door has three cross-panels and one light. An original shed-roofed extension is located on the northeast elevation, with a stairway from the porch to the basement level. Original fenestration consists of single-light casement windows and 1/1 light frame sash, double-hung. The interior of the residence appears to be original, with the walls finished with vertical redwood boards and exposed beams. Interior doors are constructed of vertical boards. A brick fireplace and chimney are situated catty-corner in the parlor, with a mantel supported by Craftsman brackets and a decorative redwood mantelpiece. Other built-in

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amenities include a Craftsman style corner cabinet or breakfront, and cabinets with a series of doors and drawers. The floors are oak, with walnut border trim. The residence faces southeast towards East Empire Street, with a lawn, shrubbery, and other ornamental plantings located in the yard. A subterranean swimming pool, measuring 40 ft. long × 20 ft. wide and formed with concrete, is located in the rear yard of the dwelling. It has a concrete walkway and an associated concrete patio that measured 4 ft. wide on the south, east, and west edges and 9 ft. wide on the northern side.

A frame guest cottage is located to the northeast of the residence. It is 12 ft. long × 10.5 ft. wide. It has a hipped roof, exposed rafter tails, and is covered with wood shingles. The walls are also clad in wood shingles, as are the porch posts. A small full-width shed-roofed porch, supported by two posts, is located on the primary southwest façade. Entry is from the front porch, via a door of vertical boards, while interior doors are frame, with four recessed panels and rimlocks. The cottage has frame casement windows, and the interior walls are paneled in painted wood. A stone fireplace, lined with brick, provided heat to the cottage.

This dwelling was designed by architect Willis Polk as a residence for the Empire Mine superintendent. It was originally built near the mineyard of the Empire Mine. Mining engineer George Sherman, a native of New York, his wife Nellie, two daughters, and a servant were residing in the house in 1900. In 1910, the residence was occupied by mine superintendent Frank Hull, his wife Alice, and son Clinton. About 1916 the house was cut in two, dragged on log rollers to the mine property's stone wall, each half hoisted to the other side, and rolled along Empire Street to its present site. In 1916, a lawsuit involving the Empire Mine brought geologist Fred Nobbs to Grass Valley as a witness. The suit lasted 12 months, during which time Fred and his wife Mildred grew fond of Grass Valley. Fred was hired on at the Empire in 1917, becoming mine manager within the year. When the Newmont Mining Company purchased the Empire holdings in 1929, Fred stayed on as manager, retiring in 1939, but becoming vice-president of the company. He died in 1960 at the age of 68, and, in 1980, his widow donated the house, where their five children were raised, to the California Department of Parks and Recreation.

8. Pennsylvania Mine and Mill (P-29-3116; CA-NEV-1911H)

Architectural Element No. 26

These two Industrial Style electrical transformer houses are identical in construction. Both structures are built of board-formed concrete, while the overhanging arched roof is of concrete formed by corrugated metal. There are 12 six-inch circular holes, lined with terra cotta pipe, in the walls near the eaves, which once provided ingress and egress to the electrical power lines. Open doorways are located on the north and south elevations.

The first Pennsylvania Claim was located by John Cadden in 1870. Combined with claims north and south, the mine eventually became the Pennsylvania Consolidated Quartz Mine. After some work was conducted in the 1870s and 1880s, the mine re-opened in 1890 with a new hoisting, pumping, and crushing plant (5-stamp mill). In 1899, due to the discovery of rich ore, the company erected a new 20-stamp mill. Lawsuits in the early 1900s, between the Pennsylvania and the Grass Valley Exploration Company over trespassing on the lode, resulted in a ruling in favor of the Pennsylvania, which acquired the Exploration Company holdings. The mine was patented in 1911 and the Empire Mine took over the lease and began the work of extensive development and the installation of machinery. In 1915, with the profitable operations exceeding expectations, the Empire purchased the combined Pennsylvania and W.Y.O.D properties. It appears likely, therefore, that the transformer houses were erected in the 1911-1912 mining improvements by the Empire, when electric power was used for the mine operation, as well as an electric power train to carry ore to the Empire stamp mill.

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9. Dwelling (P-29-3118; CA-NEV-1942H)

Architectural Element No. 27

This resource is a simple one-story frame vernacular Shingle Style Bungalow popular in California in the early 1900s with a medium-pitched side-gabled roof covered with composition shingles. The walls are clad in wood shingles, and the foundation is stone. The house has a full-width enclosed shed-roofed porch on the north front façade, and a shed-roofed rear. Primary entry is via a frame door to the porch; the door has one recessed panel and one light. Entry to the house is via a door from the porch; it has three recessed cross panels beneath one large light. Another door is located on the rear elevation. Original fenestration consists of 1/1 light frame sash, double-hung, except for 12-light frame sash in the enclosed porch. Two metal stovepipes protrude from the roof. Concrete pathways surround the house and lead to the Colfax Highway entrance, and a concrete patio is located to the side of the dwelling. A well, with stone collar mortared with concrete, is located east of the house, and has a shingled gable roof. A frame shed (Ctx. 1364), with a front-gabled roof covered with corrugated metal over wood shingles, is located southwest of the residence. Its walls are clad in wood shingles, entry is via a two-panel pedestrian door on the primary façade, and fenestration consists of fixed 6-light frame windows. The building has recently been restored and has new shingles, stoop, and foundation. The residence faces north towards the Colfax Highway (Colfax Avenue), in a yard with a lawn and an apple tree and surrounded by a hog wire fence.

10. Dwelling (P-29-3807; CA-NEV-1966H)

Architectural Element No. 28

This is a simple one-story frame Vernacular Shingle Style dwelling with a medium-pitched front-gabled roof covered with composition shingles. It is 35 ft. long × 30 ft. wide. The walls are clad in wood shingles, and the foundation is concrete. The building has undergone numerous alterations since its construction, rendering it impossible to ascertain its original appearance. The original section had a front-gabled roof, but shed-roofed additions have been made to the side and front elevations. The present entry is through a modern frame paneled door into the shed-roofed west addition, while frame 6-light windows are located in the front shed-roofed addition, which probably enclosed the original porch. There are small concrete patios in front of the building, which is surrounded by a lawn, shrubbery, and trees.

The original occupant of the bungalow is unknown. Although a residence was depicted in the approximate location in 1896, and F. Coleman's house in 1898, architecturally the dwelling appears to have been constructed after that date, during its ownership by the Empire Mine. It was undoubtedly occupied by one of its employees, as several quartz miners were listed as residing along Empire Street and Colfax Avenue in 1910. The building no longer represents any distinctive characteristics of its original style, having been remodeled in recent years.

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Non Contributing Resources

Empire Mine compressor, blacksmith, and tool buildings

These three recreated industrial buildings located within the Empire mineyard were made to period using archival documents. The buildings do not retain original architectural integrity. Although the buildings do not contribute to the significance of the Historic District, they enhance the recreational experience substantially. Accordingly, they do not undermine the historic character of the District and can be considered compatible non-contributing buildings.

Empire Mine comfort station and meeting building

Two buildings have been added to the center of the Park that do not contribute to the District's historical significance. Both have been designed to blend in with the surrounding mineyard character. The comfort station is located outside of the mineyard, adjacent to the visitor parking lot and entrance, and resembles a garage. The larger meeting building, which also has comfort stations, is adjacent to the parking lot toilets but within the mineyard fence. It resembles a warehouse style building along the perimeter of the mineyard.

Park Maintenance Yard

This building complex consists of several modern modular buildings and structures encompassed by a single tall chain linked fence. The complex was constructed after the Historic District's Period of Significance in support of ongoing maintenance and management of the Empire Mine Historic Park.

Phil Oyung Residence

This complex consists of a single-family residence and several associated outbuildings. The dwelling complex was built after the Historic District's Period of Significance to house the Oyung family. The Oyungs relocated here from the family cabin left behind in the residential area of Empire Mine, near the Clubhouse, when the mine became a State park.

Historic District Integrity

Recognizing the often-ruined nature of mining properties, National Register Bulletin 42 (NPS 1992) notes, "it is important to remember that the National Register will accept significant and distinguishable entities whose components may lack individual distinction." In this way, even run-down components that lack individual distinction may have the collective ability to convey the importance of historically significant mining operations as elements of a historic district. The integrity of the Empire Mine Historic District is assessed below by examining the seven principal aspects of integrity that affect its significance.

Location

The Historic District consists of 493 contributing elements of which 123 are sites whose integrity of location is assured by definition. Many of the 354 structures are prospects, as well as water and transportation features, such as trails and ditches, whose integrity of location is assured by the nature of the property types, as is also the case with the 10 objects present. The remaining 6 elements are extant buildings. Archival research has determined that all are situated in their historic location, or were relocated during their period of significance, as is the case with the building known as Pine Porches (P-29-3110). The Historic District retains integrity of location.

Design

The Historic District consists of the formally designed Empire Mine complex as well as numerous outlying sites and structural remains, most of which relate to earlier competing mines and shared transportation networks and water systems. Design is most clearly demonstrated in the Empire Mine and Mill Complex, the most aesthetically appealing element of the Historic District. The 13-acre domestic component—the stone-built Bourn cottage, stables, greenhouse, and gardens—were designed by Willis Polk as a unit and retain their original relationship. The mine buildings were arranged about the surface plant to form the mineyard. The stone administration buildings anchor the north side of this facility. Centrally located are the hoist house, machine shop, blacksmith shop, and other

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facilities, all appearing much as they did during the Historic District's period of significance. The ruins of the massive stamp mill and cyanide plant define the mineyard to the southwest. Not far from the mineyard are the standing headframe and ore bins for the Rowe Shaft (P-29-3114), a secondary portal opened in the late 1940s to provide an emergency escape route. The design of these later elements and the way they were integrated into the larger process is clearly evident. Surrounding the central complex are many properties associated with ventures that preceded or were subsumed by the Empire. These industrial ruins, mine waste dumps, water and transportation features, and domestic remains form a dense web of historically associated elements. Although most are sites, their design as functionally interrelated systems is evident on the landscape. Underground workings are important design components of every hard rock mine. These elements of the Historic District were not examined, however, due to their hazardous condition. Aside from approximately 20 feet of the Empire Mine's main shaft, much of the 367 miles of workings are unstable, collapsed, or flooded. During its operation, Empire Mine engineers constructed a three-dimensional model of the underground mine workings that can be seen at the Visitor Center. The Historic District retains integrity of design.

Setting

The Historic District's 855 acres are located in a rugged and rural section of California's Sierra Nevada range. Mining and logging have dominated the economy until recent years. Industrial and domestic development are quite limited, and are concentrated to the northwest of the Historic District. These developed areas associated with the growth of Grass Valley, are not visible from the Park owing to the surrounding hilly topography and the dense softwood forest. Historic images show that during its period of significance the Historic District and environs were covered with coniferous forest, portions of which were cleared for mine workings. Much of the forest has reestablished itself in recent decades and many mining features are now located among a dense growth of mature trees. The trail system throughout the Park provides a sense of the difficulties faced in traveling throughout the mine property during the period of significance. The Historic District retains integrity of setting.

Materials

This aspect of integrity concerns the characteristics of buildings and structures. The residential buildings and structures, such as those within the Bourn/Polk domestic complex and the Cassidy House, have been maintained in good repair using modern but compatible materials, such as wood shingled roofs. Mineyard buildings of stone and brick, and wood frame construction have been repaired using materials and techniques similar to the original. The industrial buildings, for example, are clad in sheets of corrugated, galvanized metal of various ages that resemble those installed during the administration of George Starr in the early 20th century. The Historic District retains integrity of materials.

Workmanship

A high degree of architectural workmanship is represented in the expression of the aesthetic principles that guided the construction of the Bourn/Polk complex. Willis Polk took neoclassic forms and added an Arts and Crafts sensibility—using natural materials on the exterior and opening up domestic interiors to natural light and a freer traffic flow on the inside. His use of steeply pitched roof gables and decorated brick chimneys on the Bourn cottage evoke the English Renaissance. The garden's mixture of brick structures, designed beds, and extensive lawns, is a mixture of geometric formality and the luxuriant English country garden. The result is formal but curiously fanciful, and distinctively Polk. The mine's early underground workings were the products of British-born miners who transferred experience in the lead and tin mines of their native Cornwall and Wales to California. Very few of the workings are accessible and the extent of collapse may never be assessed. However, surviving portions represent the workmanship of an ethnically based technology. The Historic District retains integrity of workmanship.

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Feeling

The theme of gold mining is evident throughout the Historic District by the design and historic associations of its many buildings, structures, and sites. The feeling of corporate mining is most clearly evoked in the Bourn/Polk complex and the mineyard. These constructions are visually impressive and contrasting—Bourn’s cultured dwelling and gardens set discretely apart from the stark, utilitarian, industrial buildings clad with rusting corrugated metal in which his wealth was created. Elsewhere, the Historic District’s industrial character is expressed in extensive features such as tall mine waste dumps and mill tailings that pour over the natural landscape, inundating the native topography, or the shear cut head walls surrounding linear piles of placer tailings and tail races. Aesthetically repellent, these huge artifacts are all the more effective representations of historic mining for being such awful sensory assaults. The sheer scale of the dumps and impoundment features are some of the strongest evocations of mining in the District. Although some waste dumps have been altered, such as the removal and capping of a large pile at the Empire, surviving elements throughout the Park still evoke the industrial processes that took place there. The Historic District retains integrity of feeling.

Association

The Historic District contains evidence of placer and hard rock mining in all its aspects and in every era. Features include the remains of the Empire Mine and its predecessors and competitors, as well as many smaller, independent mines that operated both before and at the same time as the Empire. Archival sources establish clear and unequivocal associations between specific archaeological properties dating to the early 1850s identified on Ophir Hill with the entity that would become the Empire Mining Company. Features representing at least 35 named mines have been identified through archaeological survey and associated archival research. These sites date from the 1850s to the 1950s. The Empire Mine was one of the longest-lasting and most productive Sierra hardrock mines. It is well represented by 15 Historic District properties that date from the 1880s until the failure of the Empire-Star Mines Company in 1957. All of the contributing properties, some with remains dating back to the 1850s, were incorporated into the Empire Mine operation over time, and many were developed further once acquired, such as the Cassidy, Daisy Hill, Orleans, and Pennsylvania mines. The Historic District retains integrity of association.

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A Property is associated with events that have made a significant contribution to the broad patterns of history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply)

Property is:

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years old or achieving significance within the past 50 years.

Period of Significance (justification)

Gold mining in the Sierra Nevada began with the discovery of gold in 1848, 30 miles from Grass Valley at Coloma. While gold seekers fanning out from the discovery site likely explored the District before the year was out, the earliest documented Euro-American settlement at Grass Valley was in 1849, and the first known placer mining in the District was in 1850 (Bean 1867:185; Morse 1927:224). The lode claim at the Empire Mine site was also located in 1850. Over the next century the Empire and dozens of other ventures throughout the District were extensively developed, with the Empire ultimately absorbing all of the others. Decline of the gold mining industry resulted in cessation of operations in 1957.

Criteria Considerations (explanation, if necessary)

N/A

Areas of Significance

(Enter categories from instructions)

Industry
Architecture
Landscape Architecture
Archaeology: Historic—Non-Aboriginal

Period of Significance

1850–1957

Significant Dates

1850

1869

(see Continuation Sheet, page 69)

Significant Person

(Complete only if Criterion B is marked above)

Bourn, William Bowers, Jr.

Bourn, William Bowers, Sr.

(see Continuation Sheet, page 69)

Cultural Affiliation

Cornish

Euro-American

Architect/Builder

Polk, Willis Jefferson

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Statement of Significance Summary Paragraph (provide a summary paragraph that includes level of significance and applicable criteria)

The Empire Mine Historic District, first prospected during the California Gold Rush and successfully developed into one of the world's most notable gold mines, qualifies for National Register listing under all four criteria. The historic context under which it is evaluated is Gold Mining in California's Sierra Nevada mountain range, 1848–1957. With respect to Criterion A, the Empire Mine is associated with the enduring quest for gold paramount in the history of California and the West. The capital venture furnished a foothold that grew into lasting settlement on the West Coast. Several people significant in our past for their accomplishments in the mining industry hail from the Empire Mine. Two generations of the Bourn family—remembered as the last bonanza kings—personally built up the mine between 1869 and 1929, navigating it from modest beginnings through the booms and busts characteristic of the industry (Egan 1998). The younger Bourn's cousin, George Starr, directed two successful expansions. The Newmont Mining Company acquired it in 1929, benefiting hugely from the mining boom associated with the Great Depression. Another generation of significant gold miners followed the Bourn dynasty, exemplified by the involvement of Fred Searls, Jr., and Fred W. Nobs—two locally significant individuals. Under Criterion C, the Bourn Cottage and arrangement of domestic and mining infrastructure at the Empire Mine superbly exemplifies the greatest years of this renowned facility. Much of the built environment was designed in the neoclassical tradition patterned after late medieval buildings by the prominent San Francisco architect, Willis Polk. His architecture and landscape design, dating to the late 1890s and early 1900s, embody the characteristics of his distinctive architectural style, period, and construction, as well as representing the work of a master and possessing high artistic values. Several architectural styles distinctive of the Gold-mining Boom of 1893–1916 further strengthen the District's architectural significance. Criterion C significance is also evident in the surviving mine infrastructure concentrated at the Empire Mine, as well as an even larger number of dilapidated facilities and features. Together these resources exemplify the District's association with areas of industry, invention, and engineering. Its many historic, non-aboriginal archaeological resources have remarkable potential to contribute information necessary for understanding many facets of the history and historical archaeology of gold mining. A large number of resources contribute to the District's Criterion D significance. In addition to technology-related themes, contributing resources pertain variously to exploration, settlement, and agriculture in the mining region. Ethnic Cornish immigrants with their deep knowledge of the mining industry are solidly associated with the District, its culture, and technology.

Narrative Statement of Significance (provide at least **one** paragraph for each area of significance)

Criterion A: Event

Gold mining in the Sierra Nevada played a pivotal role in the history of California, the West, and the United States. The lure of gold pulled large numbers of people from all over the world to what was largely an unexplored peripheral frontier, drastically and permanently changing the region. Gold mining interests shaped the social, economic, and political character of California. Businesses ranging from banking to the foundry trade formed to support mining. Gold mining supplemented the incomes of many in the general population, and helped some survive tough economic times. The industry was a major employer in California, experiencing only two real slumps before waning after the 1940s. Many of the mineral industry's technological advances sprang from innovations made in California during the Historic District's period of significance and that are exemplified in the Park's resources.

The Historic District is eligible to the National Register for its association with important events and processes of the gold mining industry in the Sierra Nevada, 1850–1957. Early placer mining and lode prospecting is evident along every creek, ravine, and slope of the Park. Several areas are so dense with the remains of gold mining that they represent historic landscapes clearly conveying their significance. Surface plants were constructed around mine portals. Structures built over successful strikes were upgraded or replaced during times of growth in the

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industry. Evidence of this punctuated activity is displayed in the many mines identified. Simple examples survive only as a collapsed portal, waste dump and, usually, a road. Mills that evolved in tandem with hard rock mining are also represented. The homes of miners from different phases, both standing and in ruins, are present throughout the Park; so, too, are the remains of small ranches that developed in support of the gold mining industry. A network of transportation and water delivery systems connects virtually every major feature of the Historic District.

The center of the Park is the Empire Mine and Mill Complex (P-29-1487), which is composed of hundreds of standing buildings and structures, objects, and archaeological features. The Empire Mine is the largest property of the Park in every respect. It has the largest number of elements, covers the most acreage, and offers a rare collection of historic buildings related to both mining and its attendant domestic and social functions. Most of this built environment is testimony to the lode-mining boom around the turn to the 20th-century. The owner of the operation, William B. Bourn, Jr., brought in San Francisco architect and friend Willis Polk to create mine buildings and residences. The visually stunning cottage grounds and mineyard are dividends on five decades of investment and consolidation, and a down payment on another five decades of the same. By the end of the gold mining period, the Empire Mine was one of the oldest, largest, deepest, longest operating, and richest gold mines in the Sierra Nevada.

The Historic District is rich in other features associated with the gold mining industry. The W. Y. O. D. Mine and Mill Complex (P-29-3747), for example, offers an impressive intact waste dump, little changed from when the mine was in operation. It also contains the ruins of a late 19th-century surface plant, stamp mill, and superintendent's home. Local miners started the operation in the 1870s. They named it Work Your Own Diggings so as to provide an alternative mode of production in this heavily capitalized industry. Michigan native Charles Brockington has been credited for the success of the mine where he served as superintendent from 1886 to 1892 (Prisk 1895:82). A legal conflict over mineral rights with the neighboring Pennsylvania Mine and Mill, also in the District (P-29-3116), erupted in the early 1900s, resulting in W. Y. O. D.'s demise with its property forfeited. The Empire Mine had absorbed both operations by 1911, and continued development and milling from the Pennsylvania shaft until an underground tramway linking back to the Empire was constructed in 1920.

Dense clusters of gold mining related resources on the slopes of Osborne Hill provide a sense of the early scramble for gold that took place throughout the Sierra Nevada. This historic landscape begins in the bed of Little Wolf Creek, where surface placer miners left a landscape characteristic of their earliest efforts, and continues up Sebastopol Ravine, where site after site provides another chapter in the Historic District's gold mining story. Numerous sites contribute to the landscape here, which is composed of large depressions, berms, waste dumps of angular rock, fenced shafts, ruins of stone, brick, and cement, and artifact deposits. Mining in Sebastopol Ravine began in the 1850s and followed the industry's characteristic boom and bust cycle that lead to the consolidations of claims and eventual incorporation into the Empire Mine.

The Historic District contains hundreds of individually documented properties each of which represents some aspect of gold mining during the Period of Significance. Several technologies (lode, milling, placer) and multiple scales (from tiny to large) are in evidence. The Park's historic landscape reflects these processes on a large scale, as well as the functional and historic linkages between components. The Historic District is important at the state level for its association with the events and processes of gold mining in California's Sierra Nevada, 1848-1957.

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Criterion B: Person

The Bourn family played an essential role in the development of the Empire Mine and in the growth of California's gold mining industry in general. The well-documented efforts to grow the mine by William B. Bourn, Sr., W. B. Bourn, Jr., and George W. Starr (nephew and cousin) spanned six decades, and led to the operation being called the "Quartz Crowned Empress of the Sierra Nevada" and members of the family as "Bonanza Kings" (Chalmers 2006:69; Egan 1998). In 1900 the *Mining and Scientific Press* described the property as a "showplace" (Bohakel 1980:12). The family's faith in the Empire Mine time and time again fueled innovations that rippled back to the foundries of San Francisco, and propelled engineers to other mines around the world. Dividends not only led to expansion and continued upgrades of the facilities in the Historic District, but also allowed the family to participate in business, policy, and the vibrant social scene in the West Coast's premier port city of San Francisco.

From his wheelchair in 1928, William Bourn, Jr., offered the Empire to local Nevada City mining engineer and head of Newmont Mining Corporation, Fred Searls, Jr. (McQuiston 1986:63). Searls and his mine manager, Fred W. Nobs, acquired the nearby North Star Mine and formed the Empire-Star Mines Company, Ltd. in 1929 (Bohakel 1980:18). Combined, these assets made the Company California's number one gold producer in 1930. The value of gold steadily rose during the Great Depression, much to the benefit of the Empire-Star Mines Company, Ltd. Fred Searls, Jr. was honored by the National Mining Hall of Fame and Museum in 1988 for his contribution to the success of the Newmont Mining Corporation. Fred Nobs continued in the same innovative manner as his predecessors, and realized great returns. Gold production in the state began to steadily rise annually from its depressed state in 1929, and the Empire-Star Mines Company, Ltd. grew in tandem. The prosperity that the mine delivered to the local economy resulted in Grass Valley being described as thriving with business despite the Great Depression (Bohakel 1980:20). No property better represents the accomplishments of these important local mining men. The Empire Mine is where all of these men achieved preeminence in their trade. The buildings and arrangement, along with the sheer scale of the mining empire they created, are clear and present. The Historic District is significant at the State level for its association with the lives of William Bowers Bourn, Sr., W. B. Bourn, Jr., and George W. Starr, and at the local level for its association with Fred Searls and Fred Nobs.

Criterion C: Design/Construction

The Empire Mine and Mill Complex (P-29-1487) is the most stunning of the hundreds of properties that contribute to the Historic District's significance. It is an excellent representation of the distinctive characteristics and construction methods of the gold mining industry in the Sierra during the period of significance and includes many elements that, though lacking individual distinction, are distinguishable within the Historic District context. The buildings designed by Willis Polk embody the distinctive characteristics of his architectural style, period, and construction, as well as representing the work of a master and possessing high artistic values. The "Cottage," designed as a summer home for Bourn, was erected in the English Tudor Manor style revived in architect-designed landmarks in the United States in the 1890s and early 1900s. Polk's Tudor Revival style was patterned after late Medieval buildings with Renaissance detailing that were popular during the Elizabethan and Jacobean periods in English history. He incorporated Shingle Style into his creations here. The Cottage was constructed of local rough-hewn granite, with brick window and door surrounds and trim. The residence features a steeply pitched side-gabled roof, parapeted gables, dormers, multiple chimney shafts, round arched entryways, wood casement windows with diamond-pane glazing, front-façade and side porches, and other elements of the style. When completed in May of 1897, it was described as "without parallel in California" (*San Francisco Chronicle*, May 2, 1897; in Kirker 1960:120).

The nearby Clubhouse, Gardener's Residence, garages, and portions of the Stable Block are of frame construction in Polk's distinctive shingle style, but share some Medieval-derived elements of Gothic Revival. The walls are clad in irregularly patterned wood shingles, with gabled shingle roofs and diamond-paned casement windows. The Clubhouse features an elaborately decorated brick chimney with multiple shafts, as well as an octagonal three-

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story tower linking its two wings. The reflection pools and gardens, terraces, ornamental plantings, fountains, *allées*, lawns, walkways, stone walls and fences, and other landscape features all contribute to both the site's and Historic District's significance.

Built as a summer residence for William B. Bourn, Jr. by his hunting companion Willis Polk, the "cottage" and gardens were designed by the men together to emulate an English country manor. The house and grounds were used by the Bourns on occasion, primarily during the summer months, but often to entertain the friends and associates of William B. Bourn, Jr. and George Starr, including important mining engineers and investors. Grass Valley's country club held frequent socials at the Clubhouse. The gardens contribute to the District's significance under Criterion C as rare formal examples of English manor gardens and the work of master architect Willis Polk. Surrounding the Tudor Revival Bourn Cottage, the gardens retain their integrity of location, design, setting, materials, workmanship, feeling, and association to a remarkable degree.

The industrial mine and mill buildings of the mineyard are architecturally significant in their own right. The Engineer's Office and Refinery, as well as a portion of the Stable Block, share many of the same architectural characteristics of the Bourn Cottage, including granite and brick construction, parapeted gables, casement windows with diamond leaded-glass panes, but in a simplified style. Although the headframe and mill building, ancillary structures, and much of the original equipment are no longer extant, the remaining buildings comprise an architectural entity that is representative of its period and method of operation. The remainder of the core mining and milling complex consist of the transformer building, hoist house, compressor building, steel headframe, carpenter and blacksmith/machine shop, as well as the incline shaft portal; they are homogeneous industrial structures, clad in rusting corrugated metal. All date to the late 1890s and early 1900s era when manager George Starr replaced and refurbished the deteriorating facilities and the mine entered its most productive period, coincidental with the boom of the mining industry in California. All of the buildings have gable roofs and are of frame construction, with stone foundations or partial walls, roof coverings and wall claddings of corrugated steel, multi-light windows, and broad and pedestrian doors. The buildings appear eligible under Criterion C as good examples of late 19th and early 20th century mine and mill structures that embody the distinctive characteristics of their type, period, and method of construction.

A number of residences surround the formal Cottage grounds and mineyard, reflecting a typical rural gold mine settlement. Dating to between the last quarter of the nineteenth century and the first quarter of the twentieth, craftsman/bungalow and shingle styles dominate the architectural landscape. The Hooper and Cassidy homes, the two oldest in the District, are fine examples of National Folk Houses of the front-gable family, a simple vernacular adaptation of the Gothic Revival style. The other, mostly vernacular homes represent the distinctive characteristics of styles popular in California from the late 1890s into the early 1900s, including mostly shingled Craftsman and Bungalow homes.

The compressor, blacksmith, and tool sharpening shops between the Empire shaft and the hoist house are interpretive recreations based on photographs and fire insurance maps. Two new Park buildings have been added to the mineyard that provide modern comforts but that blend in with their historical surroundings. Two clusters of buildings and structures—the Park maintenance yard and the Oyung residence—were built after the Period of Significance and also are non-contributing elements to the District.

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Criterion D: Historical Archaeology

A team of historical archaeologists and historians developed a research design addressing the research potential of mining properties in 2008 for the California Department of Transportation (Caltrans). The document lists six research themes important to historians and archaeologists, providing a model to assess the information potential of the Empire Mine Historic District. Properties that have the potential to contribute to these themes contribute to the Historic District's significance under Criteria D. The themes (Caltrans 2008:113) are:

- 1) Technology: mining and technological developments.
- 2) Historical ethnography/cultural history: stories of mining sites and their populations.
- 3) Ethnicity: studies of distinctive cultural groups associated with mining and cross-cultural interactions.
- 4) Gender and family: the roles of women and children.
- 5) Economy: market development, consumption, and class.
- 6) Policy: law, regulation, and self-governance.

Hardesty (2003) has noted, "Whatever the approach to assessing the significance of historical mining resources, it is clear that the landscape concept is pivotal." A landscape approach amplifies the potential of individual sites and their components because it emphasizes the contribution of each toward the system of interrelated parts that constitutes the Historic District's mining history. Considering approximately 500 properties in concert affords opportunities for relative dating, comparative analysis, and detailed examination of change over time at a grand scale. Ron Reno (1990:56) has noted, "Due to the relatively large size of most [mining] districts, it has often proved impractical for archaeological researchers to study entire districts in detail." The Empire Mine Historic District offers a rare opportunity to compare mining technology on a large scale and across time.

The Historic District's contributing elements are "information containers" (Hardesty 1987:79). Some elements date particular mining activities. Others help identify the ethnicity or class of their creators, or hint at their ideologies. Artifacts that can be traced to their place of manufacture help understand commodity flow, articulating the Empire Mine with the world system. Some mining features contain information about technology and the sequence of activities.

The 29 property types identified in the Historic District represent seven classes of properties: complex resources containing vestiges of both technology and community; exclusively mining technology; exclusively mining community; water systems; transportation networks; prospects; and relatively simple resources. These property classes reflect basic categories of data potential. Complex mining properties, for example, contain vastly different types of information than simple properties. The archaeological data potential and corresponding research issues that relate to each class of property must be considered to determine the eligibility of the variety of property types in the District.

Data Potential of Complex Mining Properties

This class of property contributes to all six of the themes identified in the Caltrans (2008) research design. Data from the Historic District's 18 complex mining sites can address the broadest range of research issues with the most focus. Included in this category are some of the best-known mines, the Empire, W. Y. O. D., Conlon, Daisy Hill, and Prescott Hill among them. Establishing dates for mining activity on these types of sites is relatively simple, given the presence of artifact deposits in association with mining feature systems. Accordingly, these resources offer the best data for understanding the evolution of the Historic District's mining landscape. Similarly, archaeological data from mining community resources (like dwellings and artifact deposits) inform interpretations of mining technology. For example, particular ethnic groups may be associated with specific technologies based on the contents of domestic assemblages. Resources in the District may also document fluctuations over time in the consumption of items by miners who employed various techniques to exploit different mineral types and ranges of productivity (e.g., low- vs. high-grade mineral deposits).

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Comparing associated community and mining systems identifies how miners organized their space in different contexts. For example, a pattern of dispersed dwellings ringing placer mines may reflect claim size and the establishment of property rights; while tight clusters of homes associated with lode mines reflects the industrial wage labor system. Individual properties, as well as Park-wide analysis of potentially related community and technology classes, provide data necessary to examine the variable use of space by independent companies and employees. Of particular concern are how various ethnicities organized their mining ventures and how they shared space with other groups of miners.

Analysis of complex mining properties and the archival record allow formulation of detailed interpretations about the Historic District. In Sebastopol Ravine, south of Little Wolf Creek, is a mining complex (P-29-3731) characteristic of early tunneling that has the appearance of overlapping coyote burrows. A well-preserved, circa 1860s era artifact deposit on the terrace above these diggings has excellent potential to provide information about the undocumented mining company that originally explored the canyon. A few hundred feet farther up the ravine is a foundation and artifact deposit from a company of miners that occupied a wood-framed boardinghouse in the 1880s.

Much of the importance to the Historic District of the complex mining properties derives from the strength of association between their creators—well-documented business enterprises and their workers—and the sites' technological and domestic remains. This link allows for well-controlled comparisons at the Historic District level: corporate vs. low-capitalized, hardrock vs. placer, multi-ethnic vs. homogeneous, Gold Rush vs. later, and so forth. The range of resources in the Park exemplifies the diversity of community and mining practices of the Sierra Nevada.

Data Potential of Mining Technology Properties

This class of property is uniquely able to address the mining technology theme (Caltrans 2008:118). The evolution of mining practices—from simple hand methods to extensive ground sluice, hydraulic, drift, and hard rock operations—is represented in the Historic District by 63 properties, as well as the 18 complex mining types already discussed. These properties reveal technological variability and change over time in contexts from the Gold Rush to the Great Depression. While many of these operations are well known, such as the Pennsylvania, Orleans, Betsy, and Heuston Hill mines, most are forgotten efforts.

The sites that were abandoned early are ideal for research, as they are frequently in better condition than those that experienced subsequent development. The Woodworth incline shaft and mill site (P-29-3725), for example, is associated with extraction and milling during the 1860s. Though it was the primary facility on the Osborn Hill Claim for several years, later expansion shifted south leaving this resource in stable condition, and capable of contributing data relevant to issues of early mining and milling. The Town Talk placer mine is another example in the form of a particularly expansive Tertiary placer mine encompassing most of the Union Hill portion of the Historic District. Lode mining never developed here since the principal deposits are buried gravels. Claimants Michael Byrne, Sr. and Thomas R. Walker, developed the mine on a massive scale in the 1870s, but archival sources contain little about the technology they used. Several properties in this and the complex mining group represent early drift mining efforts, and can provide important information about the technology used during this period, an era dominated by hydraulic mines.

National Register Bulletin 42 (Noble and Spude 1997:14) advocates interpreting the layout of entire industrial feature systems to elucidate the sequence of industrial development. Relationships between features can show how mining activity expanded within a site; many District properties also contain evidence of inter-site development. Comparisons can provide a fine-grained understanding of the gold mining industry's advance. Data derived from excavation of archaeological feature interfaces contributes to relative dating and provides key details regarding the technologies that were applied. A landscape approach that involves seriating related features can place entire mining feature systems in chronological order; for example, a wagon road at the Conlon Mine (P-29-3719) bisects a

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landscape of large prospects in the central ravine of the site. This road provided access to the cabin inhabited by John B. Conlon as early as the mid-1860s, as depicted on the mineral survey of 1892. The relationship between the features indicates that the heavily prospected ravine was explored before Conlon settled, and that these prospects reflect the formative mining activity there.

Data Potential of Mining Community Properties

The 50 properties in this group—along with the 18 complex mining properties—contain data suited for addressing the social aspects of mining and the lifeways of the miners themselves. These resources can contribute information about community-related research questions under themes of cultural history, ethnicity, gender, and economy (Caltrans 2008). Numerous dwellings in the Historic District may contain data about the ethnicity or cultural affiliation of the miners, as well as a chronology of their activities. Artifact deposits also provide information about: the miners' diet, where their food came from, how they obtained it, and how it was prepared; the types of tools that were used and animals they employed; innovations and adaptations; how they dressed and groomed themselves; and their pastimes. Studying the miners' lifestyles contributes to an understanding of their ideologies, such as the relative influence of Victorianism (Hardesty 1980) and of the role of class in social differentiation. General theories, such as world systems (Hardesty 1986, 1987, 1990), can be used to interpret the communities' consumption practices and commodity flow to better understand the Historic District's place in the broader economy. Data provided by the domestic component lend themselves to discussions on self-sufficiency and dependence in the mining frontier, regional adaptation over time, and the coping strategies employed during economic depressions. For example, a series of large artifact deposits in the Historic District, most pronounced on the southwest-facing slopes of Union Hill, are associated with seasonal laborers. These deposits have the potential to contribute to research issues regarding the social and economic circumstances of workers.

Some Historic District resources relate to ranches and homesteads, ubiquitous and often-studied elements of North American settlement history. Ranches and homesteads often have continuous histories of occupation and extensive documentation, including family genealogy, oral histories, and land and taxation records. Detailed government questionnaires (Homestead Proofs) completed by the homesteader and neighboring witnesses allow us to establish reliable associations with the archaeological feature systems. For example, Richard Alexander Carbines Harry, a blacksmith and amalgamator from England, homesteaded in 1882 the land adjacent to the Pennsylvania Mine in a home that he likely purchased from a hard rock miner. His homestead complex (P-29-3752) is composed of foundations, walls, fence lines, artifact deposits, orchards, cut banks, roads, and a ditch. Elements of these sites provide important details about farmstead operations in gold mine country, such as the use of space and materials, modernization, and abandonment. Research of agricultural property types typically explores all of its landscape elements (Beaudry 2002:130; De Cunzo 2002:105). Farmsteads are nodes in dispersed feature systems and are best understood within that context.

Understanding community elements within the broader framework of a mining context is particularly relevant for understanding the data potential of the Historic District, where resources of this type can help articulate the mining industry with other elements of an emerging society. That is, the Park's community-related resources provide the opportunity to study a wide range of social trends associated with multiple mining technologies that occurred in different time periods. For example, the Historic District data may be used to compare the various groups that mined the area: small companies of miners; late-19th-century settlers using mining to supplement their income (directly by mining on their land, as well as indirectly by leasing their mineral rights or supplying the mining industry with goods or services); lode-mining wageworkers from multiple periods; well-off mine owners and managers; and Depression-era seasonal miners. This kind of study can reveal the diversity of the enduring group labeled simply as "miners."

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Data Potential of Water System Properties

The Historic District's 48 water system properties—as well as the water system components of mining technology and complex mining properties—contain important technological data. Most mining techniques require a steady water supply and, in the case of deep lode mines, a way to de-water. Shelly Davis-King (1990:127) summarized the diversity of relevant topics in Tuolumne County, California: “As with most mining sites, research issues according to certain themes include questions about technology (e.g., what changes are found in ditch construction over time?), economy (what can be documented on the history of the water development business?), demography (how did the conveyance of water in ditches affect demographic composition?), and socio-cultural considerations (what was the ethnic composition of the labor crews?” Knowledge of water systems is essential to understanding the evolving spatial organization of the mining frontier. Indeed, water systems link domestic and mining feature systems, and play a pivotal role in both gold and settlement themes through time. Many archaeological studies have documented domestic feature systems (e.g., a miner's cabin site) in the vicinity of water conveyance features, indicating ditches' joint domestic and industrial functions. Davis-King (1990:125–126) lists 12 different site types found adjacent to ditches, only a couple of which can be considered strictly mining elements.

Ditches are located throughout the Historic District. Several are associated with specific mines or settlements including long, mid-19th-century ditch segments of the Empire Mine (P-29-3663), as well as homesteader Richard Alexander Carbine Harry's ditch (P-29-3630). Tracing ditch networks back to impoundment features often links them to dams, as demonstrated at the W. Y. O. D. mine (P-29-3644), which pulled its water supply from Little Wolf Creek two miles away. Although the system is roughly depicted on some historic maps, the exact alignment and the methods of impoundment and conveyance are known only from the extant remains.

Ditches contribute to the relative dating of feature systems. By looking at the water system's relationship with other feature systems they can be placed in chronological order. A particularly long and well-defined ditch (P-29-3620) in the vicinity of the Pennsylvania and W. Y. O. D. mines illustrates this quality. This area along the west side of the Park experienced intense mining in the 19th century, as evidenced by the many narrow mineral patents and sagas of conflicting claims. The ditch, winding its way through the landscape of mining features, appears as “old ditch” on the 1889 mineral plat for the Liberty Hill mines of James H. Oliver and company. The alignment wraps around a small lode mine that had to be developed well before the 1889 description as “old ditch.” This relationship helped to distinguish the lode mine (P-29-3751) as the first Pennsylvania shaft worked in the 1870s and depicted on an 1884 map of the region (Englebright 1884).

The Historic District's mining water systems are a network that is best appreciated at the landscape level. Although this ever-changing web of connections is incompletely documented in the historic record, understanding water system development can help in determining the technology of mining and the settlement pattern of miners.

Data Potential of Transportation Properties

These properties have the potential to yield data important to understanding technological and market development (Caltrans 2008). The 67 mining transportation properties and the transportation components of other property types contain important information about the changing economic uses of the Historic District over time and the relationship between capital investment and environmental and engineering constraints. Much of the transportation infrastructure built for early placer mining and early lode exploration was abandoned as resources played out. Subsequent mining by heavily capitalized operations incorporated these alignments or financed their own improvements. The relationship between these linear properties and other resources may be reconstructed using the same relative dating method as applied to water systems.

The Historic District's network of transportation routes was in constant flux: mines opened, closed, and reopened, and natural forces relentlessly destroyed what the engineers and laborers created. Although many of the larger roads and trails are documented on historic maps, these are snapshots in time and reveal little about the

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development, maintenance, and reuse of the system. One must view the network at the district level to appreciate it as a dynamic structure. The relationship between a series of roads linking various mines and settlements on the north slopes of Union Hill, for example, reveal a sequence of events that is not evident in any identified archival source. Overlapping waste dumps and mining cuts provide evidence of a particular route's abandonment and new areas of development.

Data Potential of Prospecting Properties

The Historic District's 222 known prospects contain information about the distribution and diverse forms of prospecting. These ubiquitous resources were created by the exploration of lode deposits. They are found both singularly and in clusters, often isolated from any other cultural features. Many isolated prospects depict abandoned efforts, or tests that did not lead to a developed mine. While researchers elsewhere often find it difficult to date or determine the individual or company responsible for a prospect, an excellent collection of mineral surveys that span the period 1869 to 1942 provide documented associations for many of the Historic District's prospects. These resources exhibit an evolution from round and oval depressions surrounded by berms, to long, trench-like mechanical cuts with the back dirt piled downslope. The principal research contribution of this property type is in the data they contain about the extent and intensity of prospecting in the Historic District through time. A dense cluster of prospects on Osborne Hill, for example, relates to numerous cuts made by the Sultana Gold Mining Company by 1907. This company consolidated many well-known gold mines on Osborne Hill in the early 20th century, and was acquired by the Empire Mine in 1933.

Data Potential of Simple Properties

The simple settlement group is composed of 1 corral, 6 fence lines, 8 monuments, 1 orchard, and 9 utility lines. These types of sites contribute to the Historic District because of the data they contain about settlement history and land use.

The fence lines and monuments in the Park offer information about the social use and demarcation of space and private property, and its development throughout the Historic District, as well as limited site-specific information. These resources were created during different time periods and legal frameworks (e.g., the No-Fence law of 1872) in relation to their activities, such as homesteading and expanding their holdings, as well as mining. Alignments are found singularly, often encompassing large areas filled with cultural features. Fence lines and property markers signal boundary maintenance—enclosing specific land uses through time, often by identified individuals or groups. An important contribution of fences to consider beyond association with individuals and events is their temporal relationship to other cultural resources. A fence line (P-29-3694) was constructed across a placer mine (P-29-3793) on the bank of South Fork Wolf Creek, the alignment of which conforms to the boundary of the Tracy Quartz Mine of J. W. Higginbottom (Uren 1890a). The placer mining occurred before erecting this boundary around a lode mine (P-29-3795). Fence lines have been found crossing mining landscapes, and intersecting ditches and roads. Accordingly, they help to chronologically order Historic District elements.

Utility lines provide information regarding the modernization of the Historic District. While some appear on historic maps, secondary lines that supplied isolated facilities do not. For example, a pipeline (P-29-3769) to the New Orleans Mine and Mill (P-29-3764) delivered water from a reservoir constructed by the Empire Mine during the Great Depression, indicating a phase of active mine development of the New Orleans at or after that time. Installation, maintenance, and abandonment of these utility supply lines also relate to construction and maintenance roads.

In summary, the Historic District is significant for the information it contains about a range of important issues from technology to social relations. This information is present within all seven classes of properties, though at different scales. The most complex mining properties, such as the Empire Mine and Mill Complex, contain a large number and variety of data types capable of contributing to many research issues. Simple properties, such as fence lines, ditches, roads, and prospects, contain limited though important data.

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Developmental history/additional historic context information (if appropriate)

History of the Empire Mine Historic District

The Gold Rush, 1848–1850

The few years between the discovery of gold in California and statehood are characterized by frenzied exploration by mostly inexperienced placer miners from around the world. Pioneers already living in the Great Valley were the first to explore western Nevada County. Within a year the forty-niners arrived and some erected cabins along Wolf Creek. Large communities sprang up in Boston Ravine and Grass Valley, within a mile of the Historic District. Prospectors scoured the waterways within the Historic District using simple technologies and leaving little evidence. One of these miners, Edwin F. Morse, recalled his efforts in Woodpecker Ravine during the winter of 1850–1851, describing living alone in a cabin there as a “lonesome existence on wild winter nights” (Morse 1927:224).

Early Statehood, 1850–1863

Gold fever carried on for a dozen years following statehood. Prospects in and around the Historic District endured and remained profitable, broadened by the discovery of outcroppings of gold-bearing quartz. The population continued to grow, and Grass Valley and Nevada City became trading centers catering to a mostly young population of single miners. The flurry of quartz prospecting led to many new discoveries, including within the Historic District on Ophir Hill, although the fledgling industry stumbled in 1853 due in part to lack of experience and technology. These obstacles were eventually overcome in the 1860s, in part by the lode-mining efforts in the Grass Valley Mining District (Limbaugh 1999:36). Cornish immigrants brought hard-rock experience and technology from the deep mines of Cornwall to Grass Valley, drawn to the type of industry with which they were most familiar. By 1861 most of the lode mining in the area was carried out by Cornish miners.

Many formal claims were located, developed, bought, and sold during early statehood, and entrepreneurs began experimenting with milling. Several companies formed around strikes in the Historic District, such as the Empire Quartz Hill Company, which quickly incorporated as the Empire Mining Company in the early 1850s. It was preceded by the Grass Valley Mining Company, which developed Osborne Hill beginning in 1851. Various mining companies worked the Heuston Hill Mine, located on Little Wolf Creek, and the adjacent Sebastopol as well, during the 1850s. The Daisy Hill, Magenta, Orleans, Prescott Hill, and other claims were all explored at this time, although not extensively worked. Cornish miners reached the head of Sebastopol Ravine by 1860 and sank the “Wheal Betsy” (Bean 1867).

Many of the other mining claims in the Park were superficially developed, but it can be inferred that the lack of lode-mining experience and resources led many to lose, sell, or abandon their rights. The mines that were consolidated and developed past the initial lode-mining crash in the early 1850s slowed in their production during the Civil War. California lost a large number of miners to the Comstock Lode from 1859 until 1864 (Clark 1979:7). The Empire Mine closed in the fall of 1863, in part due to a drought that raised production costs, as well as a shortage of workers.

Gold-mining Slump, 1864–1872

Gold production slumped statewide during this period, although there was an increase in hydraulic-mining and a concentration of productive lode mines in and around the Historic District. The number of operations and miners employed began to contract during the slump, in tandem with consolidation of mineral rights and concentration of capital on fewer portals. A smaller number of companies were focusing on larger mines. Byrne and Walker’s Town Talk Placer, patented in 1872, for example, took in 140 acres of tertiary placer claims in the Union Hill portion of the Park. The buried deposit was mined using shafts or inclines, as opposed to hydraulic cannons, and the water and

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gravel were raised by machinery and processed in “cement mills erected on them” (Prisk 1895:19; Raymond 1873a:119).

A pattern of consolidation and increased financial connection between the mines and San Francisco emerged during the slump (Mann 1982:134). San Franciscan William Bowers Bourn, Sr. invested heavily in the Empire Mine throughout the 1860s, and obtained a controlling share in 1869. He patented the Gold Quartz Claim of the Empire Mining Company under the 1866 Mining Act; the first lode mine patented in the Historic District. Improvements were steadily made to the Empire Mine, with major upgrades in 1865 and 1870, including first the 30-stamp Steamboat Mill, followed by a 20-stamp mill with the same production capacity.

Numerous other mines in the Park illustrate the same pattern of consolidation and concentration of capital. Composed of local interests and San Francisco investors, the Heuston Hill Company erected machinery for deep workings at the Heuston Hill Mine, financed a 300-foot incline shaft from 1861 to 1870 on the south bank of Little Wolf Creek, and employed 60 men in 1867 (Bean 1867; Mac Boyle 1919:251). In 1864, not far to the south, the Osborne Hill Mine came under the ownership of Joseph Woodworth, who developed an incline and erected a 15-stamp mill. The Osborne Hill Mining Company of local and outside investors took over the operation in 1868. Another early mill was erected by some overlapping interests on Little Wolf Creek in 1864.

Gold-mining Resurgence, 1873–1892

This period began with statewide resurgence in the mining industry during a four-year long worldwide economic depression. Immense hydraulic operations dominated until the mid-1880s, after which their environmental impacts began to be regulated. Large tracts of land in the Park were patented during this era, and locals again took interest in the industry, a recurring trend during economic downturns. Both settlers and mining interests, at times the same person, were vying for the same land. The Historic District took on the appearance of a sparsely settled gold mining community typical of the Sierra Nevada.

William B. Bourn, Sr., continued to develop the Empire Mine at the center of the Park until his death in 1874. His son, William Bowers Bourn, Jr., assumed much of the family business in 1878 at the age of 21, and took particular interest in the lucrative Empire Mine. Conventional wisdom was that the mine should be abandoned, being unprofitable to work at depths over 1,200 feet (Bohakel 1980:6). Young Bourn was having none of that and formed the Original Empire Mill and Mining Company and funded substantial expansion, leading to new discoveries. The entire operation was converted from steam to waterpower by 1886 (McQuiston 1986:36). The piped water system powered both the old and new 20-stamp mills and other infrastructure, and then conveyed to the massive North Star mine, which Bourn had purchased in 1884 with others, and finally on to the Allison Ranch Mine, where it was used a third time.

Bourn expanded into neighboring mines throughout the period. The Magenta Mine in Woodpecker Ravine, for example, which had been worked superficially since the 1850s, was under Bourn’s control by the mid-1880s, as was the neighboring Nevada Quartz Mine. He concentrated his capital on these operations in the same manner, evidenced by his installation of the Magenta drain tunnel and modern hoist works over the portal. It was during this period that Bourn appointed his cousin, George W. Starr, who had been working in various roles at the mine since 1881, as the new superintendent in 1887 (Bohakel 1980:8). Bourn sold his controlling share of the Empire following these successes to James D. Hague, a recently arrived engineer representing eastern investors (Steinfeld 1996:31). His shares in other mines were also sold. The Magenta Consolidated Gold Mining Company, for example, acquired the patent to the Magenta Quartz Mine and Mill Site in 1888. Starr served out the remainder of the period, but then moved on to the rich mines of South Africa in 1893.

The same pattern of consolidation and concentration of capital during this period is demonstrated by the activities of John L. Smith, a gold miner who settled just outside of the Historic District in Woodpecker Ravine. Smith was heavily involved with development of lode and tertiary deposits in the Park as the superintendent of the Orleans

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Mines, consisting of Heuston Hill, Madison Hill, Fillmore, Prescott Hill, and Betsy locations (Prisk 1895:24). Consolidated, these mines formed a contiguous block spanning Little Wolf Creek between the Empire, Sebastopol, and Osborne Hill mines. Under Smith, the Orleans Mining Company was very active during this period and processed their ore in the Orleans Quartz Mill along Little Wolf Creek.

Other mining companies active during the period of resurgence include the Pennsylvania Consolidated Mining Company, which patented the Pennsylvania Consolidated Quartz Mine in 1876. The W. Y. O. D. Gold and Silver Mining Company—composed of local miners—concentrated on their Work Your Own Diggings Mine throughout the period. They lured Charles Brockington away from the Empire to oversee their operation, where he resided until 1892. The Sebastopol Consolidated Gold Mine formed to reopen the Sebastopol Mine after its 20-year hiatus, installing used machinery relocated from their Bullion Mine.

Efforts by small joint-stock companies and independent miners were also on the rise in the Historic District. The same miner who over-wintered in Woodpecker Ravine during the Gold Rush, Edwin F. Morse, was back in the Park developing with others the Daisy Hill and New Ophir claims. A company of Irish prospectors had worked up a perennial ravine on Osborne Hill, where they were focused their efforts as the Conlon Gold Mining Company. And Samuel T. Jones worked his “Jone’s Tunnel” near his residence, along with two shallow shafts, with several neighbors.

Some Historic District residents were working for larger operations. James McCann and his neighbor, Pat Coughlin, were both Irish gold miners who settled in the Park on Ophir Hill, overlooking the Empire Mine. McCann lived with his wife and four sons, two of whom were also miners, a 15-year-old servant, and a boarder from Ohio. Coughlin was joined by his wife and two daughters. McCann and Coughlin were likely employed by one of the neighboring operations, as neither developed any substantial workings on their property. McCann eventually patented the mineral rights on the same land where he lived, possibly motivated by the resale value.

Richard Alexander Carbine Harry, George Wilson, and Francois Sauvee all settled on large tracts on the fringes of the Historic District in the 1870s. Their agricultural endeavors supported the surrounding mining community. Sauvee also supplemented his farm income during this period by first prospecting on his property, and then leasing the mining rights of what became known as the Golden Treasure. Another settler who returned to mining during this era is Felix F. Cassidy, who claimed the Cassidy Consolidated Quartz Mine, which encompassed his home. The dwelling in which this Michigan-born miner, his wife, and five children resided is still standing.

Gold-mining Boom, 1893–1916

The industry experienced considerable growth during this period, despite a worldwide economic depression during the mid-1890s. Trends established during the preceding resurgence are more pronounced during this period. Production increased substantially given the culmination of various technological advances, and Grass Valley benefited greatly. The expansion of the industry in the 1890s was documented in detail by both professionals and boosters alike (Lindgren 1896; Poingdestre 1895). The town was boasting of its growth in the third year of the depression, with local boosters claiming that, “with improved machinery for both mining and milling, and with the knowledge gained by experience, Grass Valley soon advanced to where she is today, The Quartz-Crowned Empress of the Sierra” (Prisk 1895:20).

The new owners of the Empire Mine resisted calls for investment by Robert Walker, the new superintendent after Starr departed, and the facilities deteriorated considerably. Instead of allowing the mine to decline in the face of unprecedented growth in the industry, however, William Bourn, Jr. regained controlling interest in 1896. His Empire Mines and Investment Company re-assumed management. Among the first things he did was commission San Francisco architect, Willis Polk, to design a summer “cottage” at the mine. Its completion was cause for a grand celebration by Grass Valley’s social elite, as it brought a certain degree of sophistication to the “Quartz-Crowned Empress of the Sierra.”

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Bourn, Jr. simultaneously set out to increase the Company's territory further by acquiring and consolidating nearby mines, including the Tilden and the Judd and O'Keefe claims at the head of Woodpecker Ravine. The rapidly expanding North Star Mining Company had obtained the Magenta holdings in the ravine in 1894. Expansion and building efforts at the Empire were not sufficient to lift the mine at first, prompting Bourn, Jr. to lure back his cousin, George Starr. After Starr returned as manager in 1898, an ambitious renovation, modernization, and exploration program was launched. The Empire entered the 20th century productively, with the shaft exceeding 3,000 feet on the incline. The property was described in 1902 as a "showplace" in the *Mining and Scientific Press* (Bohakel 1980:12).

Expansion and development in the western portion of the Historic District was in full swing while the Empire faltered. The W. Y. O. D. interests organized as the Grass Valley Exploration Company and acquired several patents in the Park, including Parr, Grant, Telegraph, Sims, Nuttall, and Crescent claims, as well as J. C. Harry's homestead patent on the other side of the Pennsylvania Mine. In fact, under the management of Cornish immigrant T. H. Simmonds, the W. Y. O. D. was developed more than any other operation in the entire Grass Valley region during the mid-1890s, (Prisk 1895:23). The adjacent Pennsylvania Consolidated Mining Company had grown to encompass the Liberty Hill and Noon Summer claims, and was busy developing as well. The two accused each other of trespass at the turn of the century. In 1902 the Pennsylvania was awarded all of the locations owned by the W. Y. O. D., and they continued development for the next decade at a slow, under-funded pace. It was up for sale in 1912, and appraisals indicated unfavorable conditions (Mac Boyle 1919:232). Nevertheless, the ascending Empire Mines and Investment Company leased the facility—including its 20-stamp mill and cyanide plant—in 1911, and purchased it outright in 1915 after it exceeded expectations.

Charles Brockington became the acting superintendent of the successful Orleans Consolidated in 1893 after leaving the W. Y. O. D. Mine. Substantial development continued at the extensive Orleans property, with the Orleans 5-stamp mill operating both day and night. San Franciscan investors formed the Sultana Gold Mining Company during this period in 1903, and consolidated 27 claims, blocking the Empire Mines and Investment Company from expanding into some of the richest veins. Sultana's holdings included large successful operations like the Orleans, Sebastopol, and Osborn Hill mines (Mac Boyle 1919:250–252). The Sultana Group, as it came to be known, also expanded by patenting small vestige mineral claims. The group concentrated development on the Prescott Hill and Heuston Hill ledges, including installation of a 20-stamp mill at Prescott Hill Mine in 1903 (Mac Boyle 1919:251).

Small mine companies also contributed to the surge in the industry. Charles H. Taylor, for example, organized the Daisy Hill Mining Company at the onset of the economic depression. Taylor was a native of Grass Valley, the son of a local foundry owner. As superintendent he oversaw mine development as well. Extensive expansion was also carried out at the neighboring Conlon Mine during this period before being abandoned around 1908. Some small independent owner operators managed to hold on to their claims in the face of this expansion and consolidation. Felix Cassidy, for example, continued to mine, and even expanded his own holdings sandwiched between the Empire and W. Y. O. D.

Early 20th-century Bust Years, 1916–1929

Gold production in California plummeted about 60 percent during the late teens and twenties while production costs doubled. Nevertheless, the Empire Mines and Investment Company continued expansion between 1916 and 1918, growing from 430 to 600 acres (Bohakel 1980:15). In part, expansion was predicated on the California Debris Commission's 1917 requirement that they impound their mill tailings (McQuiston 1986:49). In response, two large tailings impoundments were constructed: a larger one across Little Wolf Creek in order to capture tailings from the Empire Mine mill and a smaller one across a perennial creek below the Pennsylvania Mine mill that the Company continued to operate until 1920. Accordingly, the Empire Mines and Investment Company acquired much of Felix Cassidy's mineral rights, and those of the Golden Treasure Mining Company, which had acquired Sauvee's large agricultural patent. The New Ophir and Daisy Hill operations were also purchased in 1918, extending the

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Company's holdings farther south in direct competition with the Sultana Gold Mining Company. Inflation after the war inflamed conflicts between labor and the remaining mines, culminating in strikes at both the Empire and North Star in 1919 (Welts 1976:10). The Empire reportedly had an abundance of high-grade ore and ultimately raised pay, but tensions continued in early 1920. While visiting the mine in 1922, William Bourn, Jr. suffered a stroke that left him paralyzed. Activity for the remainder of this period was negligible. At the close of the period in 1928, the Empire hit low-grade ore and the mine was put up for sale.

The Sultana Gold Mining Company also initially continued unabated during this bust period. The company dewatered their 800-foot-deep Orleans shaft in 1916, and relocated the equipment from Prescott Hill Mine, including compressor, motor, and a 20-stamp mill built in 1903, and installed it at the Orleans shaft. A hoist was installed by 1918, and 33 men were employed from \$3.25 a day and up (Mac Boyle 1919:252). The mill was idle that year, however, and the mine had not actually produced any ore. For the remainder of the period the Sultana Group was busy patenting small claims across their territory, evidently preparing to sell the entire operation. Development continued on the nearby Conlon Mine—one of the few remaining small operations—during this bust period. Under the ownership of the Royal Gold Mining Company of San Francisco, and H. G. A. Brunnier of Grass Valley, who was the acting manager and treasurer, various improvements were made in 1919. That year a new tunnel had been driven about 600 feet, and facilities consisted of “two 75-h.p. boilers, steam-driven hoist and pump, 3-drill air compressor and a new 10-stamp electrically-operated mill, partially dismantled” (Mac Boyle 1919:147).

The Great Depression, 1929–1941

There was a return to gold mining by investment capitalists as well as the growing population of under- or unemployed following the stock market crash of 1929. From his wheelchair in 1928, before Black Tuesday, William Bourn, Jr. offered the Empire to local Nevada City mining engineer and head of Newmont Mining Corporation, Fred Searls, Jr., for far less than what it was worth (McQuiston 1986:63). George Starr retired the following year and F. W. Nobs took over. Shortly after business interests acquired the Empire, they also invested in the North Star Mine, and in 1929 formed the Empire-Star Mines Company, Ltd. (Bohakel 1980:18). Combined, these assets made the Company California's number one gold producer in 1930.

Fred Nobs continued in the same innovative manner as his predecessors during this exciting resurgence, exploring to greater depths and expanding the Company's holdings. Gold production in the state began to steadily rise annually from its depressed state in 1929, and the Empire-Star Mines grew in tandem. The Empire Mine expanded to encompass much of the remaining land in the Historic District during this bustling era, including portions of Union Hill and the 27 claims comprising the Sultana Group. President Roosevelt's move to fix gold at \$35 an ounce in 1934 initially provided extra motivation to mine, although preventing it from adjusting with the market eventually reversed this trend. The prosperity that the mine delivered to the local economy resulted in Grass Valley being described as thriving with business despite the Great Depression (Bohakel 1980:20).

Fred Nobs retired in 1938 and was replaced by Jack Mann. That same year mining engineers at the Empire-Star Mines Company, Ltd. recommended exploration at 1,730 feet below sea level, or about 4,230 feet below the ground surface, considerably deeper than any of the existing workings (McQuiston 1986:70). Additionally, the Pennsylvania Shaft was reopened and fitted with new machinery in 1939 and 1940, and the Company broke production records in 1941.

Waning Gold Operations, 1942–1957

Empire-Star Mines Company, Ltd. halted their operations in the Grass Valley Mining District in response to the War Production Board's Limitation Order L-208, which classified large production mines as non-essential to the war effort. Mines had 60 days to comply. The Empire was kept open and dewatered with the expectation that production would resume; about 175 men were even kept on the payroll, and a couple of small mineral patents made based on development and survey completed in 1942, before the War Production Board's announcement.

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The mines and mills remained closed until June 1945. By that time the wages for a severely diminished labor pool were such that production costs were simply too high (Bohakel 1980:23). Furthermore, the static gold value put in place in 1934 eventually became antiquated, ultimately depressing gold and generally discouraging investment.

The Empire-Star Mines Company, Ltd. attempted to revive production in 1947 by leasing blocks to about 125 miners and providing all the support, such as blasting powder, as well as employing about 200 men (McQuiston 1986:75). They also opened the final shaft, naming it for William C. "Lamar" Rowe, a long-time underground mining superintendent (Brower 2006:64). The Rowe Shaft, in part, was designed to provide an alternate escape route in case of emergency. The Company continued to operate their mill; processing ores for neighboring mines and what little came from their own workings, but was operating at a loss. In 1956 miners went on strike for better wages, but the Company resisted. By January 1957, with the strike still on, Empire-Star Mines Company, Ltd., began to liquidate its assets, allowed the workings to flood, and by summer had closed the mine (Welts 1976:12). In 1958 the entire holdings were sold at public auction (Bohakel 1980:26). It took until December 1961 for the last vestiges of the Company to be handled, and the staff to leave. The Empire headframe was declared a safety hazard in 1969 and was razed by dynamite. DPR acquired 770 acres of the holdings in 1974 for \$1.43 million, excluding certain mineral rights.

Historic Context: Gold Mining in the Sierra Nevada, 1848 to 1957

Two important events occurred virtually simultaneously in the early months of 1848 affecting developments in the Sierra Nevada: first, Mexico ceded California to the United States with the Treaty of Guadalupe Hidalgo at the end of the Mexican War; and second, James W. Marshall discovered gold on the American River. The news of abundant gold spread across the globe in a well-documented order: beginning locally in California; then to shipping ports across the Pacific; from Oregon to the Sandwich (Hawaiian) Islands and throughout Central and South America. Migrations of people from each place headed in turn to the poorly known, often uncharted mountains of California. President James K. Polk's final message to Congress in early December 1848 described the vastness of gold in California, suggesting that, "a branch mint of the United States at the great commercial depot on the west coast would convert into our own coin not only the gold derived from our own rich mines, but also the bullion and specie which our commerce may bring from the whole west coast of Central and South America" (Polk 1848). He optimistically pronounced that economic opportunity in California would allow the U.S. to compete with Great Britain, the dominant global power.

The president's message spread fast, encouraging would-be gold miners to make the journey to California in 1849. At the onset of the year, the non-native population was about 26,000; by the end of the year, it had reached 115,000 (Jelinek 1999:233). The Sierra Nevada foothills were heavily colonized, "and California soon became home to the nation's most ethnically diverse population" (Rawls 1999:5). Multiple camps hosting hundreds of miners from all over the world sprang up every 5 to 10 miles along every major waterway. Many of the mostly young male immigrants during this short and frenzied era arrived intent on making their riches and returning home (Jung 1999). Experienced mining men from the United States and Europe began to arrive toward the end of the year, although they remained a minority. Ultimately, the Gold Rush represents the opening up of the region to global processes, and a scramble for its land, mineral wealth, and other natural resources.

Throughout California companies of prospectors developed mining districts and codes of governance predicated on Lockean ideals of individual rights, public property, and fairness favoring first-come first-use (Zerbe and Anderson 2001:122). Gold miners—mostly inexperienced—used simple, traditional methods during this brief and chaotic period. Picks and shovels, and pans were the most common tools initially. Water's ability to separate less-dense material from free gold made it virtually essential for placer mining and milling. Sonorans from Mexico were the first group in California with any practical mining experience. Trained miners from Europe and the United States began to arrive in late 1849, in tandem with the arrival of various new mining methods (Rohe 1986:128).

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Miners quickly adapted to the region, experimenting with new methods as they pursued different types of gold deposits.

General Bennett Riley took over governorship of California in April 1849 and, at the behest of President Polk, set into motion the formation of a territorial legislature (Wells and Chambers 1882:88). A state constitution was developed, and the Euroamerican segment of society extended civic authority over California in 1850. Twenty-seven individual counties were formed that year. Nevada County was later created out of eastern Yuba County in spring of 1851, taking its name from the dominant placer-mining town of Nevada City, less than four miles from Grass Valley. President Fillmore signed the bill into law admitting California as a state on 9 September 1850.

The all-time record of gold production in California occurred in 1852, weighing in at over 3.9 million fine ounces (Clark 1979:4). Annual production nearly as large was sustained until the early 1860s. Daniel Cornford (1999:82) noticed the “importance in absolute and relative economic terms” of mining up until 1860. The State appointed John B. Trask to lead the first California Geological Survey in 1853, recognizing the preeminence of the mineral industry of the Sierra Nevada. Trask visited the Empire Mine in 1855 and 1856 (Welts 1976). California created the Office of State Geologist in 1860 to begin the ambitious task of an accurate and complete geological survey of the state. As Polk predicted in 1848, the San Francisco Mint eventually opened in 1854. Until then, prospectors relied on any of the more than 20 private mints that refined and stamped their own coins and ingots. It was also common practice during this era for pinches of gold dust to be used in local transactions. Many of the miners preferred to send some of their wealth home. For this they turned to gold dealers who purchased gold at \$8 to \$16 an ounce and sold it back east for \$18, allowing incipient banks to thrive (Schweikart and Doti 1999:214).

A minor nationwide economic depression from 1856 until 1860 encouraged many to continue mining, even though the work was becoming far more complicated. Gold mining consistently boomed during slow economic cycles throughout the period of significance. California gold production did not undergo any contraction from the start of the Gold Rush until the Civil War (Clark 1979:4). The decline resulted as much from depleted placers as from miners leaving the goldfields to join in the conflict. Census population schedules illustrate the numerical dominance of miners in California until the 1860s: miners comprised 75 and 38 percent of the workingmen in the population totals for 1850 and 1860, respectively (Cornford 1999:78). The declining proportion of miners illustrates the draw to other strikes, other occupations, or simply giving up and returning home. Many turned to ranching on small subsistence farms, and continued to mine for supplemental income. In Grass Valley the influence of gold mining in the community was moving in the other direction, from 71 percent of the population engaged in mining in 1850 to 76 percent in 1860 (Mann 1982:226). The settlement was becoming a hard-rock mining town.

Surface placers lasted until about 1855, after which river mining accounted for much of the state’s production until the early 1860s (Clark 1979:7). Expedient digging into stream banks, or “coyoting,” occurred in 1849, and evolved to true drift mining into substantial gravel beds and into deeply buried Tertiary deposits within a year (Rohe 1986:146). To expedite the removal and processing of large placer deposits, “a technology distinctly Californian in design and application” was developed (Limbaugh 1999:32). Hydraulic mining—using a barrel, canvas hose, and nozzle—was introduced in 1853 (Pisani 1999:132). The concept was refined and improved over the next 30 years, at which time its use was regulated to control debris from clogging river systems.

Gold embedded in exposed lode formations was discovered in 1850. Great quantities of money were expended in the initial quartz rush to build tunnels, shafts, arrastras, and quartz mills, but generally investments did not pay off (Wells and Chambers 1882:214). Hand methods reigned, using hand-drills and black powder for extraction (Hardesty 1988:21). Men experienced at driving hand-held rods of steel into solid rock with a hammer—either alone, called single jacking, or in pairs, called double jacking—were highly valued. California mining historian Charles Bohakel (1980:4) described the division of labor by nationality: foreign immigrants filled most of the manual and underground work at quartz mines, while U.S. citizens typically operated the machinery. The inexperience and the crudeness of early technology led to many disastrous failures, and quartz fell into disfavor.

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The arrastra—which dragged a heavy object in a circular trough to crush and grind the ore—“was the only successful milling tool for quartz miners in the early days” (Limbaugh 1999:39). The first stamp mills were impractical, made from tree trunks capped in iron or using square stems and shoes that could not rotate to ensure even wear. The first ore-crushing stamp mills in the district were of Cornish design, illustrating the early influence in the region by these experienced miners. The cost of crushing was disastrously high, and the technology for saving gold was imperfect. Widespread difficulty in processing lode deposits is attributed to the general slump in the quartz-mining industry that lasted through 1853. Stamp mill designs reached a productive level of efficiency by 1857 (McQuiston 1986:27).

The first, most significant slump in California’s mineral industry came in the wake of the Civil War, between 1864 and 1872. By 1864 the Gold Rush was over, attributable to the exhaustion of stream and bench placers easily processed with little experience or investment (Clark 1979:7). Beginning in the 1850s, and continuing after all the stream placers were depleted, miners increasingly worked for wages, as there were fewer opportunities to work independently or in small, joint stock companies (Cornford 1999:93). Wages steadily decreased: from highs above \$10 a day during the Gold Rush, to \$3 or less by 1860 (Paul 1947:350). Although mining companies continued to experiment with popular hydraulic and lode-mining techniques, this entire period was dominated by a relative statewide slump in the industry. In 1870 the ambitious geological survey of California carried out its last fieldwork, and it officially ended in 1874, emphasizing the declining relevance of the mineral industry.

California was diversifying as many gold seekers settled and developed families. The population of California continued to burgeon—to 380,000 in 1860, and 560,000 by 1870—with decreasing proportions engaged in mining (Jelinek 1999:233). The mining town of Grass Valley was no exception. There the percent of employed men working in the mining industry fell from its high of 76 percent in 1860 down to 54 a decade later, while simultaneously experiencing a big increase in farmers, artisans, and unskilled laborers (Mann 1982:Table 5). The transcontinental railroad was completed in 1869, transforming the cultural and economic landscape of the Sierra Nevada from an isolated frontier dominated by mining interests to agrarian communities of families whose more diversified economies now had access to outside markets.

Gold production in California sputtered along at 75 percent or less than what it had achieved prior to the Civil War (Clark 1979:4). National mining law was defined during this slump in order to spark industrial growth (Pisani 1999:131). Congress passed the first act affecting mining, the 1866 Stewart Bill, that established three principles: (1) that mineral land in the public domain should be open to exploration and occupation; (2) that claims established under local customs developed by each mining district shall be recognized; and (3) that title to land with certain minerals may be obtained (Peele 1941:24–06). The act established free-access doctrine to lode mines, and was expanded in 1870 to placer mines, ultimately culminating in the 1872 General Mining Act (Delony 1990:8). In part, the act provided that all valuable mineral deposits in the public domain should be open to exploration, purchase, and patent by U.S. citizens. The new law also codified regional mining district codes and created the Bureau of Mines within the U.S. Department of Commerce. The General Mining Act allowed the dominant industry in the West to finally patent mineral rights, just as farmers could claim settlements under the Homestead Act of 1862. These sweeping regulations culminated at the end of the first real bust period, and spurred the minor boom in gold production during the last quarter of the 19th century.

Gold mining continued to be a significant economic force in California during the 1860s and early 1870s, though its character had changed considerably. Hydraulic mines emerged as the primary producers for the next 20 years, keeping production relatively stable between 726,554 and 883,591 ounces (Clark 1979:7). Lode mining took a back seat to the hydraulic efforts of the period. Improvements were made to water-delivery systems, canvas was replaced by iron pipe or penstock, and nozzles were attached to iron monitors called giants that increased pressure and direction. Additional improvements to high-pressure waterwheels, like the California-made Pelton and Knight models, were made by the early 1870s (Limbaugh 1999:34). *The Century Magazine* reported that “the hydraulic

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monitor was first used, according to good authority, in 1865. But it was not until a much later date—in 1869 or 1870—that it came into anything like general use” (Evans 1883:325).

Technological advances in lode mining during the slump of the 1860s and 1870s included the invention of dynamite in 1867 and the Burleigh mechanical drill in 1869, both of which “created a technological revolution in the mining industry” (Hardesty 1988:21). Due to the hazardous rock dust they created, however, the drills—also called widow-makers—did not come into widespread use until the 1890s (Clark 1979:7). Organized miners successfully resisted the widow-makers until about 1890, when the devices were finally designed to be less dangerous. It also took many years before dynamite replaced the black powder to which miners had been accustomed. Cornish miners in Grass Valley resisted the change with a nine-week strike and held conversion off for three years before capitulating in 1869 (Cornford 1999:97). The California-improved stamp mill, originally invented for road construction, had become standard design by the 1860s. The better milling technology failed to spur lode development until advances in the collection process were achieved in the 1890s (Limbaugh 1999:41). Regardless of these advances, statewide production of gold continued, until 1873, at a fraction of what it had been prior to the mid-1860s.

The worldwide economic depression of 1873–1877 sparked resurgence in the gold mining industry. By 1874 gold production was up about 15 percent from the year before, and continued to regain importance across California between 1873 and 1892. Production peaked in 1883 at nearly 1.76 million ounces—an amount not seen since 1862 (Clark 1979:4). California policy makers were responsive to the escalation of gold production with the establishment of the State Mining Bureau in 1880. Although the volume of new mineral patents and production trends demonstrate a steady return to gold mining, the number of miners in the state did not regain its former dominance. This was due in part to new technologies that required fewer workers, particularly in large hydraulic operations.

Hydraulic mines, relying on water pressure delivered by vast networks of water systems to blast into deeply buried Tertiary deposits, were the primary source of gold. The era’s large-scale hydraulic operations were centered, according to *The Century Magazine* in 1883, in Nevada County (Evans 1883:326). Though profitable, debris from the process choked rivers downstream, causing flooding that ruined agricultural land and threatened heavily populated centers (Smith 1999:168). Nonetheless, hydraulicking dominated northern California mining until the 1884 Sawyer Decision required mines to impound all debris. Few operations could adhere to the judgment and maintain dividends, and gold production immediately dropped about 35 percent from the production peak it had just attained. In 1893 the Caminetti Act was passed, creating the California Debris Commission, which licensed hydraulic mines in the Sierra Nevada and required operators to build debris dams. Although California mining declined after the Sawyer decision, the ruling had little impact on lode mining, which eclipsed hydraulic operations thereafter (Rohe 1994:89).

Another worldwide economic depression from 1893 until 1896 stimulated an even stronger boom. Production of gold steadily rose from about 600,000 ounces in 1893 to well over 1,000,000 by 1916 (Clark 1979:4). Throughout the state, placer mining had finally lost its preeminent position to heavily capitalized lode mining (Rohe 1986:127). After 1898, dredge mining wrested huge quantities of gold from gravel fields at the mouth of each major river system along the edge of the Central Valley. Dredging, however, was far less productive than lode mining.

Investment and upgrades in hard rock mining during this boom allowed many more deposits, especially vast but low-grade ore, to be worked profitably (Clark 1979:7). Improvements to air drills, explosives, and pumps, as well as the introduction of electric power, lowered costs and improved profit. The water-cooled Leyner pneumatic drills suppressed dust, finally ushering in the percussion drill in the 1890s (Limbaugh 1999:38). The arrival of rock crushers, larger stamp mills, and state-of-the-art concentrating methods also lowered milling costs. Cyanidation was introduced in 1896 and quickly supplanted chlorination. Stamp mills reached peak size and efficiency during

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the 1880s and 1890s, and were typically powered by electricity instead of water after 1890 (Hardesty 1988:39; Limbaugh 1999:41).

The bubble burst in the early 20th century in conjunction with the United States' entry into World War I, a devastating influenza epidemic (1918–1920), and pronounced inflation. Production in California plummeted from over a million ounces in 1916 to about 400,000 ounces in 1929 (Clark 1979:4). This long steady decline in gold output did not end until after the stock market crash of 1929.

The Great Depression ushered in the final boom of historic gold mining in the region. The stock market crash and ensuing run on banks, as well as the hoarding of gold, deprived the U.S. Treasury of solvency. Consequently, federal policy during the early 1930s was designed to encourage the return of gold to the ailing bank system. President Roosevelt signed an executive order in 1933 requiring the return of gold to banks in exchange for non-gold currency. The Gold Reserve Act of 1934 strengthened reliance on U.S. currency notes over gold, allowing the nation to regain a gold standard. Presidential Proclamation 2072, which fixed the weight of the gold dollar, caused the value of gold to surge by more than 50 percent. An ounce of gold was valued at \$20.67 in 1933, when a \$20 gold coin was minted with just under an ounce of the metal.

President Roosevelt fixed the gold price at \$35 an ounce in 1934, thereby overvaluing gold and undervaluing the dollar note, but preventing future market adjustments. The initial rise in gold value provided a viable alternative for the unemployed, who took up traditional mining techniques. Statewide gold production rose above the million-ounce threshold for the first time since the 1915–1916 depression, and the extended boom years of the early 1850s and 1860s (Clark 1979:4). This incredible resurgence lasted six years, from 1936 until 1941, with the second all-time high for U.S. gold production reached in 1940.

World War II interrupted the trend of increasing gold production. Concerned that more than 20,000 men were employed at 250 gold mines and 700 placer mines throughout the western United States, the War Production Board issued Limitation Order L-208 in 1942. The order classified lode mines producing more than 1,200 tons in 1941 as nonessential for the war effort and gave mine owners 60 days to cease operations. Mines producing less than 1,200 tons were exempt. Additionally, government-sponsored scrap-metal drives associated with the war effort dismantled abandoned machinery, a process with obvious implications for cultural resources (Milford 1998:62). Most gold mining operations never resumed, and those that did start up again did not last long. The fixed price of gold, which was such a boom for the industry at first, had devalued in the 1950s to the point where mining was no longer viable.

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9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form)

(see Continuation Sheet, page 70)

Previous documentation on file (NPS):

preliminary determination of individual listing (36 CFR 67 has been Requested)
 previously listed in the National Register
 previously determined eligible by the National Register
 designated a National Historic Landmark
 recorded by Historic American Buildings Survey # _____
 recorded by Historic American Engineering Record # _____

Primary location of additional data:

State Historic Preservation Office
 Other State agency
 Federal agency
 Local government
 University
 Other
Name of repository: North Central Information Center, Sacramento

Historic Resources Survey Number (if assigned): 5945-0002-0000

10. Geographical Data

Acreage of Property 85 acres added
(Do not include previously listed resource acreage)

(770 acres previously listed)

UTM References (for Boundary Increase): North American Datum 1927

(Place additional UTM references on a continuation sheet)

1	<u>10</u>	<u>668575</u>	<u>4342444</u>	3	<u>10</u>	<u>668036</u>	<u>4341705</u>
	Zone	Easting	Northing		Zone	Easting	Northing
2	<u>10</u>	<u>669273</u>	<u>4342465</u>	4	<u>10</u>	<u>668044</u>	<u>4342027</u>
	Zone	Easting	Northing		Zone	Easting	Northing

Verbal Boundary Description (describe the boundaries of the property)

The proposed boundary increase for the Empire Mine Historic District is identical with the current legal boundary of the Empire Mine State Historic Park, including the encompassed private property of Philip Oyung. This boundary line is indicated on the attached USGS location map and approximately on the included sketch map series. The previously listed and added acres are identified on the attached USGS location map.

Boundary Justification (explain why the boundaries were selected)

The 1976 Park boundary was used as the Empire Mine Historic District boundary for the original National Register nomination and listing. The intensive mining landscape of which the District is a part extends over the entire Park and well beyond in most directions. Extending the Historic District boundary to coincide with the current Park boundary to include all of the DPR-managed resources makes sense from a historical as well as a management perspective. The new District outer boundary encloses 2 acres of private land that is surrounded by Park land. This inholding is included in the District but contains no contributing elements.

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11. Form Prepared By

name/title	Mark D. Selverston, M.A., RPA, Adrian Praetzellis, Ph.D., RPA, and Robert G. Douglass, M.A., RPA		
Organization	Anthropological Studies Center, Sonoma State University	date	18 December 2009 (rev. August 2012)
street & number	1801 East Cotati Avenue, Building 29	telephone	(707) 664-2381
City or town	Rohnert Park	state	CA zip code 94928
e-mail	asc@sonoma.edu		

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items)

(see Sketch maps on Continuation Sheets, pages 78 to 84)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: Empire Mine Historic District: Empire Mine (P-29-1487)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/5/2008

Description of Photograph(s) and number: View southeast of mineyard surface plant from manager's office; machine and carpenter shops at center, shaft house and headframe remains attached center left; this shaft opened in the 1860s (ASC Photo Acc. # ASC-21-08-857).

CA_NevadaCounty_EmpireMineHistoricDistrict_0001 of 13.

(see additional photograph descriptions on Continuation Sheets, pages 86 to 89)

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Property Owner:

name California Department of Parks and Recreation
street & number 1416 9th Street telephone 916-653-6995
city or town Sacramento state CA zip code 95814

name Philip Oyung
street & number 10684 East Empire Street telephone 530-273-3302
city or town Grass Valley state CA zip code 95945

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. to the Interior, 1849 C. Street, NW, Washington, DC.

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**National Register of Historic Places
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Name of multiple listing (if applicable)

Section number 6 Page 1

6. Function or Use (continued from page 2)

Historic Functions

(Enter categories from instructions)

DOMESTIC/secondary structure

INDUSTRY/energy facility

DOMESTIC/institutional housing

PROCESSING/industrial storage

DOMESTIC/camp

PROCESSING/manufacturing facility

COMMERCE/business

COMMERCE/professional

AGRICULTURE/horticultural facility

AGRICULTURE/agricultural outbuilding

AGRICULTURE/agricultural field

AGRICULTURE/irrigation facility

AGRICULTURE/animal facility

SOCIAL/clubhouse

LANDSCAPE/garden

LANDSCAPE/plaza

LANDSCAPE/street furniture/object

TRANSPORTATION/road-related (vehicular)

Current Functions

(Enter categories from instructions)

LANDSCAPE/parking lot

SOCIAL/clubhouse

GOVERNMENT/government office

DOMESTIC/single dwelling

DOMESTIC/secondary structure

COMMERCE/specialty store

AGRICULTURE/horticultural facility

TRANSPORTATION/pedestrian-related

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Name of multiple listing (if applicable)

Section number 7 Page 1

Table 4. Contributing Resources by Property Class

Property Type	Resource Category	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING COMMUNITY GROUP (Previously Listed Properties)				
Dwelling	Building	Previously listed in the National Register; associated with Empire Mine, P-29-001487 (CA-NEV-000967H)	P-29-003097 (CA-NEV-001927H)	A, C, D
	Building	Previously listed in the National Register; associated with Empire Mine, P-29-001487 (CA-NEV-000967H); Kendall's house complex, ca. 1930s	P-29-003767 (CA-NEV-001925H)	A, C, D
	Building	Previously listed in the National Register; associated with Empire Mine, P-29-001487 (CA-NEV-000967H); dwelling near Cassidy mine	P-29-003123 (CA-NEV-001938H)	A, C, D
COMPLEX MINING GROUP				
Ancillary mining complex	Site	Associated with 19th-century lode mining in the Tilden mineral claim	P-29-003776 (CA-NEV-001935H)	A, D
Lode mine and mill complex	Site	Empire mine and mill complex; contains 14 resources previously listed in the National Register, of which 1 (Warehouse) is no longer present	P-29-001487 (CA-NEV-000967H)	A, B, C, D
	Site	Conlon mine and mill complex	P-29-003719 (CA-NEV-001877H)	A, C, D
	Site	Prescott Hill mine and mill complex	P-29-003729 (CA-NEV-001887H)	A, C, D
	Site	W. Y. O. D. mine and mill complex	P-29-003747 (CA-NEV-001905H)	A, C, D
Lode mine complex	Site	Daisy Hill mine complex	P-29-003722 (CA-NEV-001880H)	A, C, D
	Site	Sebastopol mine complex	P-29-003730 (CA-NEV-001888H)	A, C, D
	Site	Heuston Hill claim with Bitter Pill shaft per mineral plat (Hartwell 1885c)	P-29-003733 (CA-NEV-001891H)	A, C, D
	Site	Mine in northern Parr mineral claim; road to dump on W. Y. O. D. claim	P-29-003755 (CA-NEV-001913H)	A, C, D
	Site	Fillmore lode mine complex; called Bonanza per Englebright (1884); location of original Orleans Quartz Mill	P-29-003763 (CA-NEV-001921H)	A, C, D
	Site	Town Talk-Byrne and Walker placer mine granted in 1872	P-29-003788 (CA-NEV-001947H)	A, C, D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
COMPLEX MINING GROUP (continued)				
Mining landscape complex	Site	Early prospectors camp and diggings within Sebastopol mineral claim	P-29-003731 (CA-NEV-001889H)	A, C, D
	Site	Mine development in southern portion of Cassidy Consolidated mineral claim	P-29-003761 (CA-NEV-001919H)	A, C, D
Placer mine complex	Site	Placer mining in Little Wolf Creek; within Heuston Hill mineral claim; Chinese miners	P-29-003773 (CA-NEV-001932H)	A, C, D
	Site	Mother Neal mine; hydraulic excavation and tunnel per Mother Neal mineral plat of John L. Smith (Uren 1888c)	P-29-003787 (CA-NEV-001946H)	A, C, D
	Site	Town Talk-Byrne and Walker placer mine granted in 1872; Brunswick Mine (MFG Inc. 2008)	P-29-003798 (CA-NEV-001957H)	A, C, D
	Site	Town Talk-Byrne and Walker placer mine granted in 1872; Tunnel-g Portal (MFG Inc. 2008)	P-29-003799 (CA-NEV-001958H)	A, C, D
	Site	Town Talk-Byrne and Walker placer mine granted in 1872; Home Mine (MFG Inc. 2008)	P-29-003804 (CA-NEV-001963H)	A, C, D
MINING COMMUNITY GROUP				
Artifact deposit	Site	Associated with early 20th-century temporary or transient occupation or roadside disposal	P-29-001479 (CA-NEV-001974H)	D
	Site	Associated with early 20th-century mine development in Bowser mineral claim	P-29-003587 (CA-NEV-001850H)	D
	Site	Associated with early 20th-century mine development in Bowser mineral claim	P-29-003588 (CA-NEV-001851H)	D
	Site	Associated with W. H. James per Nevada Quartz mineral plat notes (Bethell 1887c); within Sauvee's land patent; in vicinity of OH-10 which was not relocated	P-29-003605 (CA-NEV-001852H)	D
	Site	Industrial material from nearby development	P-29-003614 (CA-NEV-001853H)	D
	Site	Associated with early 20th-century temporary occupation; within Pennsylvania mineral patent	P-29-003628 (CA-NEV-001855H)	D
	Site	Associated with dwelling adjacent to Park; early 20th-century household disposal	P-29-003631 (CA-NEV-001857H)	D
	Site	Associated with ca. 1900-1920s-era disposal near Nevada Quartz mineral claim	P-29-003651 (CA-NEV-001860H)	D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING COMMUNITY GROUP (continued)				
Artifact deposit (continued)	Site	Associated with ca. 1920s temporary occupation; within O.K. Quartz Mine mineral claim	P-29-003659 (CA-NEV-001862H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Ophir Hill	P-29-003661 (CA-NEV-001863H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003674 (CA-NEV-001865H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003682 (CA-NEV-001868H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003684 (CA-NEV-001869H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003685 (CA-NEV-001870H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003686 (CA-NEV-001871H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003690 (CA-NEV-001872H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003691 (CA-NEV-001873H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003692 (CA-NEV-001874H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003715 (CA-NEV-001875H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003716 (CA-NEV-001876H)	D
	Site	Associated with early 20th-century temporary habitation above Empire tailings impoundment	P-29-003740 (CA-NEV-001898H)	D
	Site	Associated with late 19th- and early 20th-century temporary or transient occupation on Noon Summer mineral claim	P-29-003777 (CA-NEV-001936H)	D
	Site	Associated with 19th and 20th-century habitation in Woodpecker Ravine	P-29-003784 (CA-NEV-001943H)	D
Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003786 (CA-NEV-001945H)	D	

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING COMMUNITY GROUP (continued)				
Artifact deposit (continued)	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003789 (CA-NEV-001948H)	D
	Site	Associated with early 20th-century temporary or transient occupation on Union Hill	P-29-003809 (CA-NEV-001968H)	D
	Site	Associated with early 20th-century temporary or transient occupation along South Fork Wolf Creek	P-29-003819	D
	Site	Associated with building depicted on folio (USGS 1896)	P-29-003824 (CA-NEV-001970H)	D
Dwelling	Building	Associated with Empire Mine, P-29-001487 (CA-NEV-000967H); Nob's (mining manager) house; ca. 1895; frame and shingle; known as "Pine Porches"; relocated from Empire Mill area ca. 1916; now State Park Office	P-29-003110 (CA-NEV-001940H)	A, C, D
	Building	Depicted on folio (USGS 1896)	P-29-003118 (CA-NEV-001942H)	A, C, D
	Building	Depicted on folio (USGS 1896)	P-29-003807 (CA-NEV-001966H)	D
	Site	Contains 1 resource previously listed in the National Register; Felix Cassidy's ca. 1870s dwelling	P-29-003120 (CA-NEV-001915H)	A, C, D
	Site	Depicted on folio (USGS 1896)	P-29-003676 (CA-NEV-001866H)	D
	Site	Sam Jones' dwelling per Oliver mineral plat (Bethell 1887d); namesake of Jone's Tunnel in Dakota mineral plat (Uren 1889a), local placer miner with Oliver brothers	P-29-003750 (CA-NEV-001908H)	D
	Site	Dwelling per Madison Hill mineral plat (Hartwell 1885d)	P-29-003765 (CA-NEV-001923H)	D
	Site	James McCann's dwelling per OK mineral plat (Hartwell 1887)	P-29-003768 (CA-NEV-001926H)	D
	Site	Habitation on Ophir Hill; within Sultana's Mills No. 1 mineral claim	P-29-003770 (CA-NEV-001929H)	D
	Site	Associated with Rush and Layton-Yankee Jack mine, P-29-003775 (CA-NEV-001934H)	P-29-003774 (CA-NEV-001933H)	D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING COMMUNITY GROUP (continued)				
Dwelling (continued)	Site	Short term occupation on Union Hill	P-29-003790 (CA-NEV-001949H)	D
	Site	Associated with Town Talk-Byrne and Walker placer mine; depicted on 1896 folio	P-29-003801 (CA-NEV-001960H)	D
	Site	Depicted on folio (USGS 1896)	P-29-003806 (CA-NEV-001965H)	D
	Site	F. G. Beatty's dwelling (Uren 1897); depicted on folio (USGS 1896); within Gem placer mineral claim	P-29-003808 (CA-NEV-001967H)	D
Homestead complex	Site	Richard Alexander Carbine Harry ca. 1882 homestead complex; home purchased from Grase	P-29-003752 (CA-NEV-001910H)	D
Ranch complex	Site	Associated with Manion dairy; depicted on folio (USGS 1896); single bedrock milling feature	P-29-001474 (CA-NEV-000964H)	A, D
	Site	Associated with Town Talk placer mine; "land claimed by Charles W. Kitts" per Tracy mineral plat (Uren 1890)	P-29-003800 (CA-NEV-001959H)	A, D
Ranch element	Site	Associated with W. H. James; within Sauvee's land patent; in vicinity of OH-10 which was not relocated	P-29-003737 (CA-NEV-001895H)	A, D
	Site	Associated with W. H. James; within Sauvee's land patent	P-29-003738 (CA-NEV-001896H)	A, D
MINING TECHNOLOGY GROUP				
Hole	Structure	Associated with mine development; consisting of 10 isolated holes	P-29-003582	A, C, D
Lode mine	Site	Mine development in Nevada mineral claim	P-29-002508 (CA-NEV-001975H)	A, C, D
	Site	Contains resources previously listed in the National Register; Rowe mine	P-29-003114 (CA-NEV-001941H)	A, C, D
	Site	Mine development in Betsy mineral claim	P-29-003726 (CA-NEV-001884H)	A, C, D
	Site	Betsy mine	P-29-003727 (CA-NEV-001885H)	A, C, D
	Site	Mine development depicted on Prescott Hill mineral plat (Hartwell 1885e)	P-29-003728 (CA-NEV-001886H)	A, C, D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING TECHNOLOGY GROUP (continued)				
Lode mine (continued)	Site	Madison Hill mine	P-29-003742 (CA-NEV-001900H)	A, C, D
	Site	"old" incline per 1885 Heuston Hill mineral plat (Hartwell 1885c)	P-29-003743 (CA-NEV-001901H)	A, C, D
	Site	Madison Hill Quartz Mine mineral claim	P-29-003744 (CA-NEV-001902H)	A, C, D
	Site	Heuston Hill Mine	P-29-003745 (CA-NEV-001903H)	A, C, D
	Site	Mineral development per Dakata mineral plat (Uren 1889a)	P-29-003746 (CA-NEV-001904H)	A, C, D
	Site	Golden Treasure mine	P-29-003748 (CA-NEV-001906H)	A, C, D
	Site	Early Pennsylvania mine (Englebright 1884)	P-29-003751 (CA-NEV-001909H)	A, C, D
	Site	Cassidy mine; depicted on Cassidy consolidated mineral plat (Bethell 1877)	P-29-003758 (CA-NEV-001916H)	A, C, D
	Site	Small early 20th-century mine or ancillary site on F. Sauvee's land patent adjacent to Empire Mine tailings impoundment, P-29-003760 (CA-NEV-001918H)	P-29-003759 (CA-NEV-001917H)	A, C, D
	Site	Keystone mine (Uren 1897); within Happy Jack lode mineral claim	P-29-003762 (CA-NEV-001920H)	A, C, D
	Site	Small isolated lode mine; development per Heuston Hill mineral plat (Hartwell 1885c)	P-29-003771 (CA-NEV-001930H)	A, C, D
	Site	Mine development per Heuston Hill mineral plat (Hartwell 1885c)	P-29-003772 (CA-NEV-001931H)	A, C, D
	Site	Lode mine in vicinity of Rush and Layton; Yankee Jack veins (Uren 1916)	P-29-003775 (CA-NEV-001934H)	A, C, D
Site	Magenta mine landscape; extensive middle Woodpecker Ravine landscape with placer, mining, lode mine; Magenta Mine and extensive mine workings per Magenta (Bethell 1876b), Nevada (Englebright 1885), Tunnel Discovery (Bethell 1886b), and Nevada (Uren 1888d) plats	P-29-003780 (CA-NEV-001939H)	A, C, D	

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Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING TECHNOLOGY GROUP (continued)				
Lode mine (continued)	Site	Mine development on Union Hill	P-29-003792 (CA-NEV-001951H)	A, C, D
	Site	Gorilla Quartz claim per Tracy mineral plat (Uren 1890a)	P-29-003794 (CA-NEV-001953H)	A, C, D
	Site	Small lode mine at edge of Tracy Quartz Mine mineral claim	P-29-003795 (CA-NEV-001954H)	A, C, D
	Site	Tracy mine	P-29-003796 (CA-NEV-001955H)	A, C, D
	Site	Town Talk-Byrne and Walker placer mine granted in 1872	P-29-003802 (CA-NEV-001961H)	A, C, D
Lode mine and mill	Site	Pennsylvania mine and mill	P-29-003116 (CA-NEV-001911H)	A, C, D
	Site	Woodworth mine and mill (Mather 1866)	P-29-003725 (CA-NEV-001883H)	A, C, D
	Site	Old Heuston Hill mine and mill	P-29-003732 (CA-NEV-001890H)	A, C, D
	Site	New Orleans mine and mill	P-29-003764 (CA-NEV-001922H)	A, C, D
	Site	Tracy mine and mill; "sulphuret works" per folio (USGS 1896)	P-29-003797 (CA-NEV-001956H)	A, C, D
Mining landscape	Site	Mine development in Woodpecker Ravine; variously known as Phoenix quartz mine per Magenta (Bethell 1876b) and Tunnel Discovery (Bethell 1886b) mineral plats, Woodpecker Gravel Company's placer mine per General Grant mineral plat (Uren 1894) and folio (USGS 1896)	P-29-000612 (CA-NEV-000554H)	A, C, D
	Site	Mine development in W. Y. O. D. mineral claim	P-29-003642	A, C, D
	Site	Associated with Empire Star Mines Company Happy Jack lode development (McGuire 1942)	P-29-003653 (CA-NEV-001861H)	A, C, D
	Site	Associated with early mine development in northeast corner of Madison Hill mineral claim	P-29-003664 (CA-NEV-001864H)	A, C, D
	Site	Mine development in Daisy Hill mineral claim	P-29-003720 (CA-NEV-001878H)	A, C, D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING TECHNOLOGY GROUP (continued)				
Mining landscape (continued)	Site	Mine development in Daisy Hill mineral claim	P-29-003721 (CA-NEV-001897H)	A, C, D
	Site	Mine development in Daisy Ravine; depicted on New Ophir (Uren 1889c) and Brockington (McGuire 1907a) mineral plats	P-29-003723 (CA-NEV-001881H)	A, C, D
	Site	Placer mining in Little Wolf Creek; "Old workings" per Dakota mineral plat (Uren 1889a)	P-29-003735 (CA-NEV-001893H)	A, C, D
	Site	Mine development in Nevada Quartz mineral claim	P-29-003736 (CA-NEV-001894H)	A, C, D
	Site	Orleans Tunnel; mine development in Fillmore (Hartwell 1885b) and Brockington (McGuire 1907a) mineral claims	P-29-003739 (CA-NEV-001897H)	A, C, D
	Site	Mine development in Daisy Ravine; Albany Tunnel per New Ophir mineral plat (Uren 1889c)	P-29-003741 (CA-NEV-001899H)	A, C, D
	Site	Mine development per Liberty Hill/Noon Summer mineral plat (Uren 1889b)	P-29-003749 (CA-NEV-001907H)	A, C, D
	Site	Cassidy mining landscape	P-29-003756 (CA-NEV-001914H)	A, C, D
	Site	Cassidy's mine development per Linden mineral plat (Miller 1897)	P-29-003766 (CA-NEV-001924H)	A, C, D
Placer mine	Site	Placer mining in Woodpecker Ravine	P-29-003067 (CA-NEV-001858H)	A, C, D
	Site	Placer mining in Pennsylvania mineral claim	P-29-003778 (CA-NEV-001937H)	A, C, D
	Site	Placer mining in Woodpecker Ravine	P-29-003785 (CA-NEV-001944H)	A, C, D
	Site	Large Tertiary placer mine on Union Hill; topography depicted on folio (USGS 1896)	P-29-003791 (CA-NEV-001950H)	A, C, D
	Site	Placer mining in South Fork Wolf Creek	P-29-003793 (CA-NEV-001952H)	A, C, D
	Site	Town Talk-Byrne and Walker placer mine granted in 1872; Shakleton Tunnel Portal (MFG Inc. 2008:Table 1)	P-29-003803 (CA-NEV-001962H)	A, C, D

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Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
MINING TECHNOLOGY GROUP (continued)				
Placer mine (continued)	Site	Town Talk-Byrne and Walker placer mine granted in 1872; hydraulic cut and 100 ft. long tunnel depicted on 1888 Mother Neal mineral plat (Uren 1888c); Tunnel-i Portal (MFG Inc. 2008)	P-29-003805 (CA-NEV-001964H)	A, C, D
Tailings impoundment	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H); constructed in 1917	P-29-003760 (CA-NEV-001918H)	A, C, D
	Structure	Associated with Pennsylvania mine and mill, P-29-003116 (CA-NEV-001911H); constructed in 1917	P-29-003826 (CA-NEV-001972H)	A, C, D
	Structure	Associated with Orleans mine and mill, P-29-003764 (CA-NEV-001922H), or Prescott mine and mill complex, P-29-003729 (CA-NEV-001887H)	P-29-003827 (CA-NEV-001973H)	A, C, D
PROSPECTING GROUP				
Prospects	Structure	Associated with mineral exploration; consisting of 222 isolated prospects	P-29-003580	A, C, D
SIMPLE GROUP				
Corral	Site	Corral on park map and trail tour guide	P-29-003754 (CA-NEV-001912H)	A, D
Fence line	Structure	Associated with Sauvee's land patent	P-29-003604	D
	Structure	Associated with Sauvee's land patent	P-29-003608	D
	Structure	Associated with Pennsylvania mine and mill, P-29-003116 (CA-NEV-001911H)	P-29-003627	D
	Structure	Associated with Tracy Mine, P-29-003795 (CA-NEV-001954H)	P-29-003694	D
	Structure	Associated with Town Talk placer mine and Wilson property	P-29-003705	D
	Structure	Associated with Wilson property	P-29-003822	D
Monument	Object	Associated with property demarcation; consisting of 8 isolated monuments	P-29-003600	D
Orchard	Site	Wilson's 1876 land patent; belonged to Manion by 1890s	P-29-003820	A, D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
SIMPLE GROUP (continued)				
Utility line	Object	Associated with Magenta mining landscape, P-29-003780 (CA-NEV-001939H)	P-29-002506	D
	Object	Associated with Magenta mining landscape, P-29-003780 (CA-NEV-001939H)	P-29-002507	D
	Site	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H)	P-29-003624	D
	Site	Associated with Golden Treasure mine, P-29-003748 (CA-NEV-001906H)	P-29-003625	D
	Site	Associated with Golden Treasure mine, P-29-003748 (CA-NEV-001906H)	P-29-003626	D
	Site	Associated with W. Y. O. D. mine and mill complex, P-29-003747 (CA-NEV-001905H)	P-29-003637	D
	Site	Associated with W. Y. O. D. mine and mill complex, P-29-003747 (CA-NEV-001905H)	P-29-003638	D
	Site	Associated with Orleans mine and mill, P-29-003764 (CA-NEV-001922H)	P-29-003662	D
	Site	South Fork Wolf Creek	P-29-003821	D
TRANSPORTATION GROUP				
Rural road	Structure	Osborne Hill	P-29-001481	A, C, D
	Structure	Associated with Magenta mine landscape, P-29-003780 (CA-NEV-001939H)	P-29-002504	A, C, D
	Structure	Osborne Hill; depicted on folio (USGS 1896)	P-29-003581	A, C, D
	Structure	Osborne Hill	P-29-003590	A, C, D
	Structure	Osborne Hill	P-29-003595	A, C, D
	Structure	Associated with Prescott Hill mine and mill, P-29-003729 (CA-NEV-001887H)	P-29-003601	A, C, D
	Structure	Associated with prospects on south end of Madison Hill mineral claim (Hartwell 1885d)	P-29-003602	A, C, D
	Structure	Osborne Hill; depicted on folio (USGS 1896)	P-29-003616	A, C, D
	Structure	Osborne Hill	P-29-003617	A, C, D
	Structure	Associated with Sauvee's land patent; depicted on folio (USGS 1896); pre-dates 1917 tailings impoundment, P-29-003760 (CA-NEV-001918H)	P-29-003618	A, C, D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
TRANSPORTATION GROUP (continued)				
Rural road (continued)	Structure	Associated with Pennsylvania mine and mill, P-29-003116 (CA-NEV-001911H)	P-29-003634	A, C, D
	Structure	Associated with W. Y. O. D. mineral claim	P-29-003636	A, C, D
	Structure	Associated with mule corral, P-29-003754 (CA-NEV-001912H)	P-29-003641	A, C, D
	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H)	P-29-003647	A, C, D
	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H)	P-29-003649	A, C, D
	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H)	P-29-003657	A, C, D
	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H); depicted on folio (USGS 1896)	P-29-003658	A, C, D
	Structure	Associated with Orleans mine and mill, P-29-003764 (CA-NEV-001922H)	P-29-003666	A, C, D
	Structure	Associated with Tilden ancillary mining complex, P-29-003776 (CA-NEV-001935H)	P-29-003667	A, C, D
	Structure	Old Empire trail per Chesapeake mineral plat (Waggoner 1897)	P-29-003668	A, C, D
	Structure	Associated with dwelling, P-29-003676 (CA-NEV-001866H)	P-29-003675	A, C, D
	Structure	Union Hill	P-29-003679	A, C, D
	Structure	Associated with Tracy mine and mill, P-29-003797 (CA-NEV-001956H)	P-29-003693	A, C, D
	Structure	South Fork Wolf Creek; depicted on folio (USGS 1896)	P-29-003695	A, C, D
	Structure	Union Hill	P-29-003698	A, C, D
	Structure	Union Hill; depicted on folio (USGS 1896)	P-29-003700	A, C, D
Structure	Associated with ranch complex, P-29-003800 (CA-NEV-001959H)	P-29-003702	A, C, D	
Structure	Associated with lode mine complex, P-29-003799 (CA-NEV-001958H)	P-29-003703	A, C, D	

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
TRANSPORTATION GROUP (continued)				
Rural road (continued)	Structure	Associated with Town Talk placer mine, P-29-003803 (CA-NEV-001962H)	P-29-003708	A, C, D
	Structure	Union Hill	P-29-003711	A, C, D
	Structure	Union Hill	P-29-003713	A, C, D
	Structure	Union Hill	P-29-003717	A, C, D
	Structure	Union Hill; depicted on folio (USGS 1896)	P-29-003718	A, C, D
	Structure	Union Hill	P-29-003813	A, C, D
	Structure	Union Hill	P-29-003814	A, C, D
	Structure	Associated with Town Talk placer mine; depicted on folio (USGS 1896)	P-29-003816	A, C, D
Tramway	Structure	Associated with Prescott mine and mill complex, P-29-003729 (CA-NEV-001887H); operated by Sultana Gold Mining Company 1903-1916	P-29-003591	A, C, D
Wagon road	Structure	Associated with Magenta mining landscape, P-29-003780 (CA-NEV-001939H)	P-29-002505	A, C, D
	Structure	Associated with Daisy Hill mines per Uren (1888a), P-29-003720 (CA-NEV-001878H)	P-29-003579	A, C, D
	Structure	Osborne Hill	P-29-003583	A, C, D
	Structure	Osborne Hill	P-29-003585	A, C, D
	Structure	Associated with Prescott Hill mine and mill complex, P-29-003729 (CA-NEV-001887H)	P-29-003593	A, C, D
	Structure	Osborne Hill	P-29-003596	A, C, D
	Structure	Associated with ranch element, P-29-003738 (CA-NEV-001896H)	P-29-003597	A, C, D
	Structure	Associated with early Orleans mill per Fillmore mineral plat (Hartwell 1885b)	P-29-003603	A, C, D
	Structure	Osborne Hill	P-29-003607	A, C, D
	Structure	Osborne Hill	P-29-003609	A, C, D
	Structure	Osborne Hill	P-29-003613	A, C, D
	Structure	Osborne Hill	P-29-003615	A, C, D

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
TRANSPORTATION GROUP (continued)				
Wagon road (continued)	Structure	Associated with Dakota mine, P-29-003746 (CA-NEV-001904H)	P-29-003621	A, C, D
	Structure	Associated with Harry's homestead complex, P-29-003752 (CA-NEV-001910H)	P-29-003632	A, C, D
	Structure	Associated with W. Y. O. D. mine and mill complex, P-29-003747 (CA-NEV-001905H)	P-29-003640	A, C, D
	Structure	Associated with Magenta mining landscape, P-29-003780 (CA-NEV-001939H)	P-29-003671	A, C, D
	Structure	Union Hill	P-29-003681	A, C, D
	Structure	Union Hill	P-29-003683	A, C, D
	Structure	Union Hill; depicted on folio (USGS 1896)	P-29-003689	A, C, D
	Structure	Union Hill	P-29-003696	A, C, D
	Structure	Associated with placer mine, P-29-003791 (CA-NEV-001950H)	P-29-003699	A, C, D
	Structure	Associated with ranch complex, P-29-003800 (CA-NEV-001959H)	P-29-003701	A, C, D
	Structure	Associated with Town Talk mine, P-29-003798 (CA-NEV-001957H)	P-29-003704	A, C, D
	Structure	Associated with Town Talk mine, P-29-003804 (CA-NEV-001963H)	P-29-003707	A, C, D
	Structure	Associated with Town Talk mineral claim	P-29-003712	A, C, D
	Structure	Associated with Town Talk placer mine, P-29-003715 (CA-NEV-001875H)	P-29-003714	A, C, D
	Structure	Associated with Town Talk mine, P-29-003809 (CA-NEV-001968H)	P-29-003810	A, C, D
	Structure	Associated with Town Talk mine, P-29-003809 (CA-NEV-001968H)	P-29-003811	A, C, D
Structure	Associated with Town Talk mine, P-29-003789 (CA-NEV-001948H)	P-29-003812	A, C, D	
Structure	Associated with Town Talk mine, P-29-003786 (CA-NEV-001945H)	P-29-003815	A, C, D	

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
WATER SYSTEM GROUP				
Dam/reservoir	Structure	Associated with W. Y. O. D. mine and mill complex, P-29-003747 (CA-NEV-001905H)	P-29-003646 (CA-NEV-001859H)	A, C, D
	Structure	Union Hill	P-29-003677 (CA-NEV-001867H)	A, C, D
	Structure	Daisy Ravine	P-29-003724 (CA-NEV-001882H)	A, C, D
	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H)	P-29-003769 (CA-NEV-001928H)	A, C, D
Ditch	Structure	Associated with "dry reservoir" in Badger Hill mine (outside District) per folio (USGS 1896)	P-29-001475	A, C, D
	Structure	Osborne Hill	P-29-001480	A, C, D
	Structure	Osborne Hill	P-29-003584	A, C, D
	Structure	Osborne Hill	P-29-003586	A, C, D
	Structure	Osborne Hill	P-29-003592	A, C, D
	Structure	Osborne Hill	P-29-003594	A, C, D
	Structure	Daisy Ravine	P-29-003598	A, C, D
	Structure	Little Wolf Creek	P-29-003599	A, C, D
	Structure	Depicted on Dakota mineral claim (Uren 1889a)	P-29-003619	A, C, D
	Structure	Depicted as "old ditch" on Liberty Hill/Noon Summer mineral plat (Uren 1889b)	P-29-003620	A, C, D
	Structure	Associated with Liberty Hill/Noon Summer mineral claim	P-29-003622	A, C, D
	Structure	Associated with Dakota mineral claim of Samuel T. Jones and vicinity placer mining	P-29-003623	A, C, D
	Structure	Associated with Harry's homestead complex, P-29-003752 (CA-NEV-001910H)	P-29-003630	A, C, D
	Structure	Associated with Alexander C. Harry's homestead complex, P-29-003752 (CA-NEV-001910H)	P-29-003635	A, C, D
	Structure	Associated with placer mining in northern W. Y. O. D. mineral claim	P-29-003639	A, C, D
Structure	Conaway's ditch per Tunnel Discovery mineral plat (Bethell 1886b)	P-29-003643	A, C, D	

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Name of Property

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
WATER SYSTEM GROUP (continued)				
Ditch (continued)	Structure	Associated with W. Y. O. D. mine and mill complex, P-29-003747 (CA-NEV-001905H)	P-29-003644	A, C, D
	Structure	Associated with Harry's homestead complex, P-29-003752 (CA-NEV-001910H)	P-29-003645	A, C, D
	Structure	Associated with Sauvee's land patent	P-29-003648	A, C, D
	Structure	Associated with Cassidy mineral claim	P-29-003650	A, C, D
	Structure	Little Wolf Creek	P-29-003652	A, C, D
	Structure	Little Wolf Creek	P-29-003654	A, C, D
	Structure	Little Wolf Creek	P-29-003655	A, C, D
	Structure	Little Wolf Creek	P-29-003656	A, C, D
	Structure	Associated with early Empire mine and mill complex, P-29-001487 (CA-NEV-000967H)	P-29-003660	A, C, D
	Structure	Associated with early Empire mine and mill complex, P-29-001487 (CA-NEV-000967H); depicted on 1885 Heuston Hill mineral plat (Hartwell 1885c)	P-29-003663	A, C, D
	Structure	Woodpecker Ravine	P-29-003669	A, C, D
	Structure	Union Hill	P-29-003672	A, C, D
	Structure	Union Hill Ditch	P-29-003673	A, C, D
	Structure	Union Hill	P-29-003678	A, C, D
	Structure	Union Hill	P-29-003680	A, C, D
	Structure	Grass Valley Water Company's ditch per Uren (1897); associated with ditch, P-29-003697	P-29-003687	A, C, D
	Structure	Associated with placer mine, P-29-003785 (CA-NEV-001944H)	P-29-003688	A, C, D
	Structure	Grass Valley Water Company's ditch per Uren (1897); associated with ditch, P-29-003687	P-29-003697	A, C, D
	Structure	Associated with Town Talk mineral claim	P-29-003706	A, C, D
Structure	Associated with Mother Neal mineral claim; associated with Union Hill ditch, P-29-003697	P-29-003709	A, C, D	

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Table 4. Contributing Cultural Resources by Property Class (continued)

Property Type	Resource Type	Name/Association	Primary (Trinomial)	NRHP Criteria
WATER SYSTEM GROUP (continued)				
Ditch (continued)	Structure	Associated with Mother Neal mineral claim; associated with Grass Valley Water Company's ditch, P-29-003697	P-29-003710	A, C, D
	Structure	Associated with Mother Neal mineral claim; associated with Grass Valley Water Company's ditch, P-29-003697	P-29-003817	A, C, D
	Structure	Associated with Wilson property; South Fork Wolf Creek	P-29-003823	A, C, D
Drain outlet	Site	W. Y. O. D. mine drain outlet	P-29-003629 (CA-NEV-001856H)	A, C, D
	Site	Heuston Hill drain outlet; depicted on Madison mineral plat (Hartwell 1885d)	P-29-003825 (CA-NEV-001971H)	A, C, D
	Structure	Magenta mine drain outlet	P-29-003670	A, C, D
Penstock	Structure	Associated with Empire mine and mill complex, P-29-001487 (CA-NEV-000967H); built in ca. 1886; also supplied North Star and Allison Ranch mines	P-29-000041 (CA-NEV-001854H)	A, B, C, D
	Structure	Associated with Town Talk placer mine, P-29-003805 (CA-NEV-001964H); related to ditch, P-29-003697	P-29-003818	A, C, D

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8. Statement of Significance (continued from page 29)

Significant Dates

1879

1886

1896

1902

1929

1947

1957

Significant Person

Starr, George William

Searls, Fred, Jr. (at the local level)

Nobs, Fred W. (at the local level)

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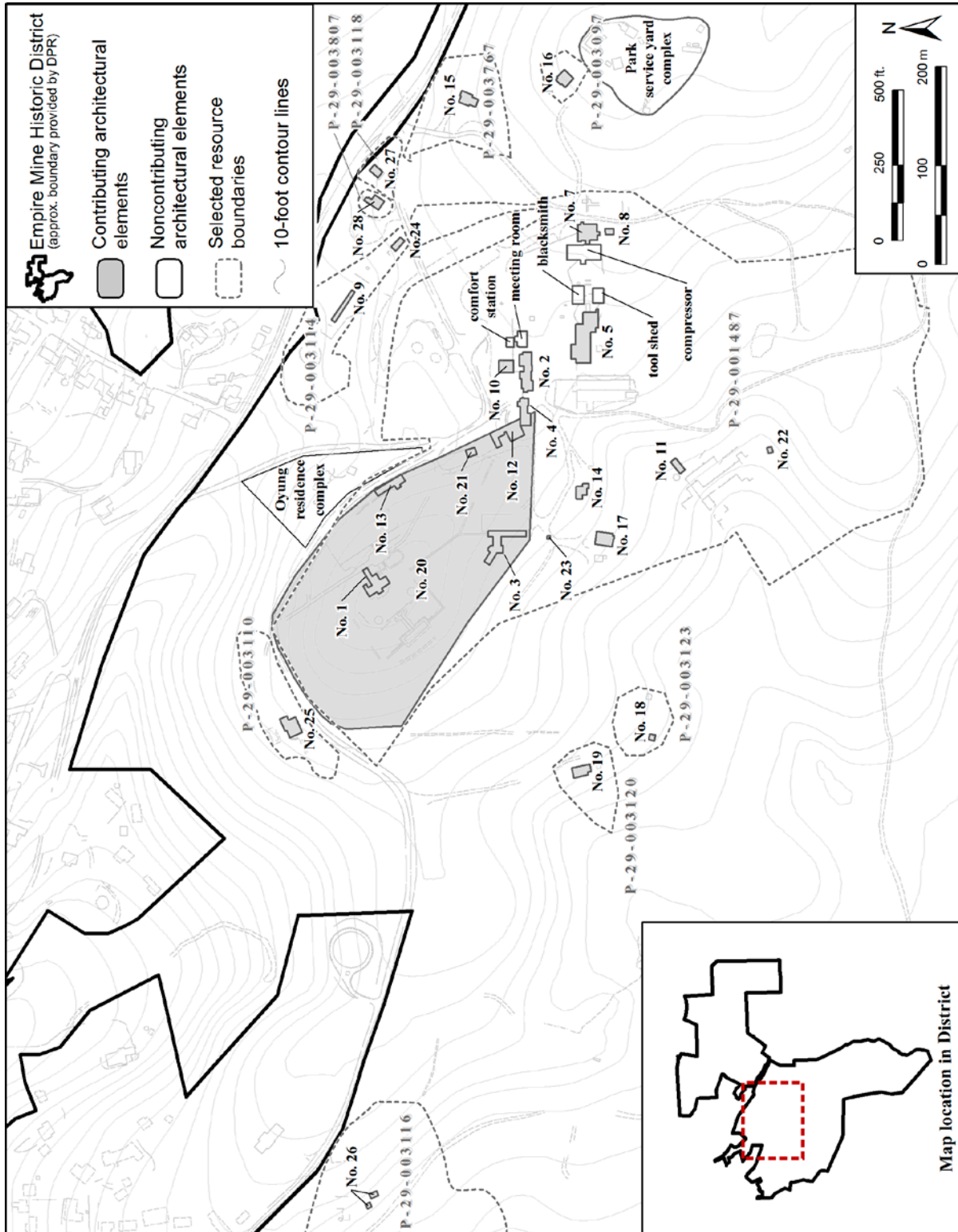
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Section number NA Page 1 Photographs

Photographs: (continued from page 50)

Name of Property: Empire Mine Historic District: Empire Mine and Mill Complex (P-29-1487)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Mark Selverston

Date Photographed: 7/7/2009

Description of Photograph(s) and number: View south of east portion of mineyard; machinery display in foreground, hoist house center left and recreated compressor building center (ASC Photo Acc. # ASC-21-08-856).

CA_NevadaCounty_EmpireMineHistoricDistrict_0002 of 13.

Name of Property: Empire Mine Historic District: Empire Mine and Mill Complex (P-29-1487)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/5/2008

Description of Photograph(s) and number: View north of circa 1905 mine office designed by Willis Polk (ASC Photo Acc. # ASC-21-08-863).

CA_NevadaCounty_EmpireMineHistoricDistrict_0003 of 13.

Name of Property: Empire Mine Historic District: Empire Mine and Mill Complex (P-29-1487)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/5/2008

Description of Photograph(s) and number: View east of stamp mill ruins, surface plant in background (ASC Photo Acc. # ASC-21-08-864).

CA_NevadaCounty_EmpireMineHistoricDistrict_0004 of 13.

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Section number NA Page 2 Photographs

Photographs (continued):

Name of Property: Empire Mine Historic District: Empire Mine and Mill Complex (P-29-1487)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/5/2008

Description of Photograph(s) and number: View northwest of circa 1896 Bourn cottage designed by Willis Polk; rear of building and center right is fenced access road (ASC Photo Acc. # ASC-21-08-865).

CA_NevadaCounty_EmpireMineHistoricDistrict_0005 of 13.

Name of Property: Empire Mine Historic District: Empire Mine and Mill Complex (P-29-1487)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/5/2008

Description of Photograph(s) and number: View northeast of circa 1896 Bourn cottage designed by Willis Polk; front of building in background and cascade and reflection pool in foreground (ASC Photo Acc. # ASC-21-08-866).

CA_NevadaCounty_EmpireMineHistoricDistrict_0006 of 13.

Name of Property: Empire Mine Historic District: Cassidy Dwelling (P-29-3120)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/4/2008

Description of Photograph(s) and number: View of Felix Cassidy's circa 1870s dwelling, looking south (ASC Photo Acc. # ASC-21-08-804).

CA_NevadaCounty_EmpireMineHistoricDistrict_0007 of 13.

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Section number NA Page 3 Photographs

Photographs (continued):

Name of Property: Empire Mine Historic District: Rowe Mine (P-29-3114)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/4/2008

Description of Photograph(s) and number: View of headframe constructed over a secondary portal opened in the late 1940s as an emergency exit, looking north (ASC Photo Acc. # ASC-21-08-867).

CA_NevadaCounty_EmpireMineHistoricDistrict_0008 of 13.

Name of Property: Empire Mine Historic District: Pennsylvania Mine and Mill (P-29-3116)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Judith Marvin

Date Photographed: 6/4/2008

Description of Photograph(s) and number: View of transformer structure at Pennsylvania mine and mill, looking east; the mine portal here was used between the 1870s and 1920 (ASC Photo Acc. # ASC-21-08-801).

CA_NevadaCounty_EmpireMineHistoricDistrict_0009 of 13.

Name of Property: Empire Mine Historic District: W. Y. O. D. Mine and Mill Complex (P-29-3747)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Sandra Massey

Date Photographed: 6/16/2008

Description of Photograph(s) and number: View of furnace remains at late 19th-century surface plant ruins, at W. Y. O. D. mine and mill complex, looking east; mine in operation the last three decades of the 19th-century (ASC Photo Acc. # ASC-21-08-455).

CA_NevadaCounty_EmpireMineHistoricDistrict_0010 of 13.

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Section number NA Page 4 Photographs

Photographs (continued):

Name of Property: Empire Mine Historic District: Conlon Mine and Mill Complex (P-29-3719)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Sandra Massey

Date Photographed: 5/6/2008

Description of Photograph(s) and number: View of circa 1902 surface plant ruins, at Conlon mine and mill complex, looking south; the original late 19th-century facilities burned down (ASC Photo Acc. # ASC-21-08-001).

CA_NevadaCounty_EmpireMineHistoricDistrict_0011 of 13.

Name of Property: Empire Mine Historic District: Prescott Hill Mine and Mill Complex (P-29-3729)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Sandra Massey

Date Photographed: 5/20/2008

Description of Photograph(s) and number: View of retaining wall between Prescott Hill mine shaft and surface plant ruins, looking northeast; mining occurred here between the 1850s and at least the Great Depression (ASC Photo Acc. # ASC-21-08-262).

CA_NevadaCounty_EmpireMineHistoricDistrict_0012 of 13.

Name of Property: Empire Mine Historic District: New Orleans Mine and Mill (P-29-3764)

City or Vicinity: Grass Valley

County: Nevada

State: California

Photographer: Sandra Massey

Date Photographed: 7/15/2008

Description of Photograph(s) and number: View of surface plant ruins, looking east; three companies mined here between the 1880s and 1957, including the Orleans, Sultana, and Empire (ASC Photo Acc. # ASC-21-08-635).

CA_NevadaCounty_EmpireMineHistoricDistrict_0013 of 13.