

Historic Mining Resources

Class II Basic Inventory

Chase Gulch and Maryland Mountain

Black Hawk

Gilpin County, Colorado

GL.LG.R16

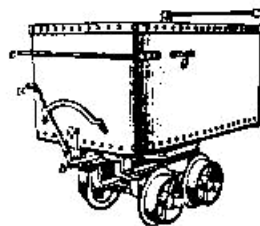
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Bureau of Land Management permit C-62281



Colorado Historical Society - Office of Archaeology and Historic Preservation
COLORADO CULTURAL RESOURCE SURVEY
 Cultural Resource Survey Management Information Form

I. PROJECT SIZE

Total federal acres in project: <u>60.36</u>	Acres surveyed: <u>60.36</u>
Total state acres in project: <u>0</u>	Acres surveyed: <u>0</u>
Total private acres of project: <u>70.6</u>	Acres surveyed: <u>70.6</u>
City of Black Hawk (public): <u>206.6</u>	Acres surveyed: <u>206.6</u>
	Total acres surveyed: <u>337.56</u>

II. PROJECT LOCATION

County: Gilpin Principal Meridian: 6

USGS Quad map name(s) and date(s): Black Hawk (7.5'), Central City (7.5'), 1970

The above quadrangles predate survey for Sections. The locations below are projected from current data.

Township: 3 S Range: 72 W Sec: 6 1/4s SW, SW

Township: 3 S Range: 73 W Sec: 12 1/4s N 1/2

III. SITES

Smithsonian Number	Resource Type				Eligibility				Management Recommendations							
	P r e h i s t o r i c	H i s t o r i c a l	P a l e o n t o l o g i c a l	U n k n o w n	E l i g i b l e	N o t E l i g i b l e	N e e d e d D a t a	Contri butes to Natio nal Regist er Distri ct	N o F u r t h e r W o r k	P r e s e r v e / A v o i d	M o n i t o r	T e s t	E x c a v a t e	A r c h i v a l R e s e a r c h	Other District Designation	
5GL.2104.1		X			X					X						X
5GL.2126.2		X			X					X					X	X
5GL.2148		X				X				X						X
5GL.2149		X				X			X							X
5GL.2150		X			X					X					X	X
5GL.2151		X				X				X						X

5GL.2152		X				X				X					X
5GL.2153		X				X			X						
5GL.2154		X			X					X		X		X	X
5GL.2155		X				X				X					X
5GL.2156		X				X				X					X
5GL.2159.1		X				X			X						X
5GL.2160		X			X					X				X	X
5GL.2161		X			X					X				X	X
5GL.2162		X			X					X				X	X
5GL.2165		X			X					X		X		X	X
5GL.2166		X				X				X					X
5GL.2167		X			X					X		X	X	X	X
5GL.2168		X			X					X				X	X
5GL.2169		X			X					X		X		X	X
5GL.2170.1		X			X					X				X	X
5GL.2170.2		X			X					X				X	X
5GL.2171		X				X				X					X
5GL.2172		X				X				X					X
5GL.2173		X			X					X				X	X
5GL.2174		X				X				X					X
5GL.2176		X			X					X				X	X
5GL.2177		X				X				X					X
5GL.2178		X				X				X					X
5GL.2179		X				X			X						X
5GL.2180		X				X			X						X
5GL.2181		X				X			X						X
5GL.2182		X				X				X				X	X
5GL.2183		X			X					X				X	X
5GL.2184		X				X			X						X

5GL.2185		X				X				X					X
5GL.2187		X				X			X						X
5GL.2190		X				X			X						X
5GL.2191		X				X			X						X
5GL.2195		X				X				X					X
5GL.2196		X				X			X						X
5GL.2197		X				X				X				X	X
5GL.2198		X				X			X						X
5GL.2199		X				X				X				X	X
5GL.2200		X			X					X		X		X	X
5GL.2201		X				X				X				X	X
5GL.2202		X				X				X					X
5GL.2203		X			X					X				X	X
5GL.2204		X			X					X				X	X
5GL.2205		X				X				X					X
5GL.2206		X			X					X		X		X	X
5GL.2207		X			X					X				X	X
5GL.2208		X				X				X					X
5GL.2209		X				X				X					X
5GL.2210		X			X					X		X		X	X
5GL.2211		X			X					X				X	X
5GL.2212		X			X					X				X	X
5GL.2213		X			X					X		X	X	X	X
5GL.2214		X				X				X					X
5GL.2215		X				X				X				X	X
5GL.2216		X				X				X				X	X
5GL.295		X				X			X						X
5GL.297		X			X					X				X	X
5GL.298		X			X					X				X	X

5GL.299		X				X			X						X
5GL.300		X			X					X			X	X	X
5GL.301		X				X				X				X	X
5GL.302		X				X				X				X	X
5GL.613		X				X			X						X
5GL.644		X				X				X				X	X
5GL.7.11		X			X					X				X	X
5GL.7.12		X				X				X				X	X
5GL.398		X				X				X				X	X
5GL.720		X				X				X				X	X
5GL.721		X				X			X						X
5GL.722		X				X			X						X
5GL.723		X				X				X					X
5GL.724		X				X				X				X	X
5GL.725		X			X					X				X	X
5GL.728		X				X				X				X	X
5GL.730		X				X				X				X	X
5GL.732		X				X				X					X
5GL.733		X				X				X				X	X
5GL.739		X			X					X				X	X

IV. ISOLATED FINDS

Please note that by definition IFs are not eligible to the National Register and require no further work.

Smithsonian Number	Resource Type			
	P r e h i s t o r i c	H i s t o r i c a l	P a l e o n t o l o g i c a l	U n k n o w n
5GL.2171		X		
5GL.2174		X		
5GL2177		X		

ABSTRACT

During 2014, Mountain States Historical (MSH) conducted a Class II Basic Inventory of Maryland Mountain and Chase Gulch, northwest of the City of Black Hawk. The city commissioned the inventory to guide planning and management of the mountain and gulch as open space. In particular, the city is interested in understanding the area's assemblage of historic mining resources, their interpretive potential and preservation needs. At the same time, Mountain States Historical carried out a more detailed survey and inventory of Bureau of Land Management (BLM) tracts in the gulch. The city negotiated with BLM to acquire the tracts in a Land Disposal for full ownership of the gulch. The inventory was specifically required to be Section 106 compliant by BLM in order for the disposal to move forward. And yet, the disposal neatly complimented the Class II inventory, allowing a full understanding of the area's history and resources.

In conducting both survey projects, MSH closely examined all of Maryland Mountain and Chase Gulch and reviewed the records of resources documented prior to 2014. The surveys and records review served as a screening mechanism that enabled MSH to focus on the richest area of open space for more intensive work. In particular, MSH found that Chase Gulch (ridgeline-to-ridgeline), and Maryland Mountain's south and east flanks offer an outstanding historic landscape of hardrock prospects and mines, placer mines and infrastructure, concentration mill ruins, residential complexes, wagon road networks, and the intact Gilpin Tramway railroad grade. The remaining open space has a much lower density of mostly prospect complexes, which are not significant as historic resources. MSH accounted for 85 resources in the above-mentioned areas alone. Of these, 30 were recorded for the Basic Inventory and 50 for the Land Disposal. An additional 5 had been registered with the Office of Archaeology and Historic Preservation for previous projects in years past, and were briefly examined in 2014. MSH evaluated all the resources as contributing elements of the area's historic landscape and a potential historic district, as well as individual eligibility to the National Register of Historic Places (NRHP) and the State Register of Historic Properties (SRHP). MSH found that 67 contribute to the landscape and have district potential. Of these, 32 qualify for the NRHP and 2 for the SRHP. In summary, Chase Gulch is a good mining landscape with integrity and many archaeological examples of prospects, mines, and mills characteristic of Gilpin County. Further, that landscape and its many potentially eligible sites could be designated as a historic district.

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CHAPTER 1: INTRODUCTION AND PREVIOUS WORK

Project Overview

Black Hawk was one of three significant industrial cities in the Central City Mining District, Gilpin County, Colorado. In 1859, John H. Gregory discovered placer gold in Gregory Gulch within what became Black Hawk's western boundary. The subsequent rush changed the course of Rocky Mountain history. The rush gave rise to Central City, the second major community to the west and up the gulch, and Nevadaville, the third, lying farther to the west. Nevadaville became known as the "City of Mines" for its concentration of hardrock operations, and Central City evolved into a mining, commercial, and cultural center. The prevailing view is that Black Hawk assumed a role as the district's ore treatment center because the North Fork of Clear Creek provided water for power and processing. Although this is true, there is more to the story. In actuality, Black Hawk also had its own rich mining industry with dozens of underground operations honeycombing the hills in and around town. The industry was productive enough to warrant a network of wagon roads and, in 1886, branches of the Gilpin Tramway railroad.

Chase Gulch, ascending northwest from town, and the North Fork of Clear Creek to the north, were microcosms of the industry. Each drainage had numerous hardrock mines, placer gold operations, road networks, and the railroad. Most of the mines, however, were exhausted by around 1910 and closed, their materials of value then being salvaged for reuse elsewhere. The hills that had been stripped bare gradually recovered ecologically. Today, Chase Gulch and the North Fork of Clear Creek are a historic landscape with archaeological resources forming a fabric that conveys a strong feeling of what once was.

Around 2012, the City of Black Hawk began pursuing a campaign to buy Chase Gulch and Maryland Mountain to create open space. From the start, the city was aware of the area's historical significance and natural qualities. The gulch lies in the north half of Section 12, with Maryland Mountain in the south half of Section 1, T. 3 S, R 73 W. Black Hawk began by purchasing a quilt-work of private, patented mining claims throughout the area, as well as Bureau of Land Management (BLM) fractions in Section 1. In 2013, the city initiated the process of acquiring BLM fractions in Section 12, to consolidate ownership of the area. The North Fork was not left out, as Maryland Mountain makes up its entire west bank. In BLM terminology, the pending transfer of its Section 12 lands is a "Land Disposal," which is currently in process.

Open space and heritage planning brought the Chase Gulch and Maryland Mountain historic resources to the fore. Black Hawk commissioned the study offered here to better understand the newly acquired resources, especially in consideration of heritage tourism, outdoor recreation, and possible designation as a historic district. In 2014, the city contracted with Mountain States Historical (MSH) to complete the study, selecting MSH because of its expertise in mining. MSH also developed the concurrent cultural resource inventory required by the BLM for the Land Disposal, better known as Section 106 compliance. The Section 106 inventory neatly folded into the larger study and provided excellent information. Its report is a separately published compliance document.

In summary, the Chase Gulch and Maryland Mountain study fulfills a number of related goals. The overarching ones are:

- Find and identify all principal historic resources in the area.

- Evaluate those resources for quality, historical significance, and management needs.
- Assess their potential for heritage tourism and outdoor recreation.
- Finally, consider the area as a whole for broad-scale planning and historic district designation.

Summary of Results

Mining resources are not uniformly distributed throughout Chase Gulch and Maryland Mountain. Rather, the principal resources form a concentration extending approximately one mile up Chase Gulch from its mouth in Black Hawk. Mines are scattered throughout the entire viewshed, from ridgeline to ridgeline, with remnants of ore treatment mills along the gulch floor. Bates and Winnebago hills, which form the gulch's south wall, have a high concentration of sites, and Maryland Mountain, the north wall, has a considerable number as well. However, Maryland Mountain's west, north, and east sides have few mines of note. There is, however, a series of mines along the mountain's east base, which forms the North Fork's west side.

The study accounted for 85 mines, mills, prospects, and residential complexes. All qualify as archaeological resources because buildings, structures, and equipment are long gone with only a few exceptions. Generally, archaeological features such as foundations, platforms, walls, and subsidence zones represent surface facilities and mine openings. Of the resources, 67 have sufficient integrity to contribute to a historic district either as elements of the mining landscape or through their small-scale features. Separately, 32 are important enough to qualify individually for the National Register of Historic Places. The entire body of resources demonstrates that Chase Gulch is historically significant as a whole. The historic landscape conveys a distinct feeling of the region's mining industry, while many individual resources embody aspects of design, architecture, engineering, and even ethnic trends that were important on statewide and possibly national levels. The quality of the setting is good, modern intrusions few, and the land is public with only a handful of private in-holdings.

CHAPTER 2: PROJECT PURPOSE AND METHODOLOGY

Project Objectives

The City of Black Hawk purchased Chase Gulch and Maryland Mountain in 2013 to preserve as open space. The city initiated the Land Disposal with the Bureau of Land Management (BLM) the following year to acquire federal land fractions scattered amid the newly purchased parcels. The projected completion date for the disposal is 2015. As part of its open space planning, the city sought guidance in order to understand exactly what it had purchased in terms of the historic resources on the land, and how they might be optimally managed. The city and Mountain States Historical (MSH) arrived at a list of information needs and designed the survey project presented here to meet them. The broader objectives are:

- Find, identify, and quantify all principal historic resources in the Chase Gulch and Maryland Mountain open space.
- Assess the potential for historic district designation and individual NRHP nominations. Rely on NRHP Criteria and National Park Service bulletins as filters.
- Assess the potential for heritage tourism and adventure recreation of each individual resource. Issues include accessibility, sensitivity, interpretive value, and impacts from use.
- Provide recommendations for use and preservation needs of each individual resource. Public access for some resources may not be appropriate.
- Provide broad-scale recommendations addressing open space resources as a whole. Considerations include heritage tourism, trail development, ecological management, and guidelines for repairing damage from natural deterioration. Guidelines are based on NRHP Areas of Integrity.
- Offer recommendations for additional work such as detailed resource documentation, individual NRHP nominations, district designation, more survey for the above, and archaeological monitoring for construction/repair.
- Contribute the conclusions (this report and survey forms) to History Colorado for a lasting record.

Methodology

To fulfill these objectives, MSH assembled a body of information from four complimentary sources, outlined below. The final product is a master list and detailed record of each individual resource.

File Search. MSH identified all previously recorded resources by searching the Compass database and comparing the results with History Colorado GIS information. Hypothetically, the

two sources should offer identical lists, but in fact there were differences. MSH examined site records in History Colorado offices for accuracy and thoroughness. Nearly all were wanting.

URS Land Exchange. In 2005, URS Corporation, a cultural resource firm, intensively inventoried hundreds of acres of BLM land in Section 1 and elsewhere, including the north and west sides of Maryland Mountain. URS's site forms and project report provided guidance through discussion of inventory findings and resource descriptions.

Land Disposal. Section 106 compliance for the 2014 Land Disposal requires a 100 percent inventory of all BLM land tracts. All resources on the tracts must be both recorded to Class III standards or better, and evaluated for significance under NRHP Criteria. This information and the effects of the disposal are then presented to the BLM in a compliance report. But, given that all the land tracts included in open space were part of the inventory, those results also contributed to the broader resource study. The disposal found and documented many resources sought for the current study, including many that had been previously recorded.

Basic Inventory. Also known as a Class II reconnaissance survey, the inventory is a streamlined method for covering a lot of ground, efficiently finding principal resources, and providing baseline documentation. Areas outside of the BLM tracts were inspected, guided by preliminary vantage point overviews and predictive modeling. Chase Gulch and Maryland Mountain were first examined from overlook vantage points to locate visually prominent resources such as mines and mill complexes. Once identified, these clusters of resources and their surrounding areas were intensively surveyed on foot. Predictive modeling forecasts areas favorable to specific types of resources, such as the tendency of ore concentration mills to lie along drainage floors rather than high on mountainsides. Thus, all drainage floors and gently sloped terrain were intensively surveyed because of their likelihood for mill and residential complexes, placer mines, and aspects of infrastructure. Predictive modeling also suggests that transportation arteries are almost always associated with centers of activity, and roads and pack trails were thus identified and closely surveyed. Additionally, areas with thick vegetation were also intensively walked to account for concealed resources. During the survey, all principal and most minor previously recorded resources were re-visited because existing site forms were insufficient to meet project needs.

Once located, all the principal resources were recorded at a basic level. The intent was to gather enough information to characterize content, integrity, potential eligibility for the State Register of Historic Properties and NRHP, and status in a potential historic landscape or district. Other considerations included management needs, heritage tourism potential, and potential for revealing important information. Each resource was dissected into its individual archaeological and engineered features, mapped, and described in narrative text. The quality of artifact assemblage and potential for buried archaeological deposits and features received special attention. MSH attempted to assemble a high quality photographic record for each resource, however, conditions confounded even simple overview perspectives in many cases. Some of the challenges were extremely thick vegetation, difficulty finding appropriate perspectives, the contrast between high-altitude light and deep shadow which concealed individual features, crowded overviews, and topography.

Historic Resource Definitions

- *Building*: A building was a construct with a roof and one or more walls, and it sheltered activities within an interior space. For a resource to qualify as a building today, most of its walls should stand intact.
- *Building Ruin*: A building qualifies as a ruin if the walls are no longer complete and the roof is gone. A ruin is a type of archaeological feature.
- *Structure*: A structure is a construct built to serve a specific purpose other than shelter. Structures may have been countersunk into the ground as with cisterns; associated with industrial processes; facilitated a flow of materials like ditches; or a component of land improvement such as a retaining wall.
- *Engineered Structure*: An engineered structure was built according to a design or plan, complex in itself, and a component of a larger system. Some engineered structures were beneath the surface such as buried pipelines and culverts. Underground mine workings are an advanced form of subsurface engineered structures.
- *Structure Ruin*: Structures qualify as ruins when their components are mostly collapsed or missing. Ruins are archaeological features.
- *Archaeological Feature*: Archaeological features are a broad category encompassing most of a site's attributes other than buildings, structures, and objects. The category refers to manifestations above ground, while those below-ground are subsurface features (see below). Archaeological features are distinct physical entities that often possess artifacts with interpretive value. Features commonly represent past buildings, structures, and other intentional constructs through material evidence. Examples include earthen platforms, foundations, ruins, depressions, topographic alterations, and debris. Archaeological features also can be the physical result of organic processes, and may not be the remnants of designed constructs. Placer workings, waste rock dumps, refuse scatters, and mine open-cuts are samples of such features. Collections of artifacts that represent activity areas apart from buildings and structures fall within the general category.
- *Subsurface Archaeological Feature*: This group includes features below ground-surface. Subsurface ruins such as collapsed root cellars, intentionally buried artifact deposits like privy pits, and naturally buried artifact deposits exemplified by refuse dumps qualify.
- *Object*: Objects are individual, small-scale constructs that are easily moved. Some objects were designed for mobility, such as vehicles and portable mining equipment. Others were designed to be stationary, but were either self-contained or functioned independently, like some pieces of machinery. When a component of a system, a machine qualifies as a structural or engineering feature.
- *Artifact*: The category includes all man-made items lying around a site. Most artifacts associated with mining resources can be categorized as structural materials, industrial debris, domestic refuse, or household items. Although artifacts are commonly attributable to archaeological features, they also constitute the physical makeup of buildings and structures. Artifacts are extremely important because they can help interpret the timeframe and function of an individual feature, and as well as the history of an entire site and its people.

Criteria for Evaluating Significance

The resources were evaluated for significance in five areas of interest relevant to open space planning and resource preservation. The areas are:

Rural Historic Landscape. The National Park Service broadly defines a rural historic landscape as follows:¹

“For the purposes of the National Register, a rural historic landscape is defined as a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.

“Rural landscapes commonly reflect the day-to-day occupational activities of people engaged in traditional work such as mining, fishing, and various types of agriculture. Often they have developed and evolved in response to both the forces of nature and the pragmatic need to make a living.”

For Chase Gulch and Maryland Mountain to qualify as a rural historic landscape, they should reflect land use patterns, culture, and industry characteristic of prospecting and mining from 1859-1941. Further, the area must possess an intact natural setting and a predominance of contributing historic resources. Character-defining features can include but are not limited to prospects, mines, structures, buildings, archaeological remnants thereof, claim monuments, wagon roads, packtrails, and disbursed artifacts. Resources contribute when they are prominent or when their small-scale attributes are visible from roads and trails.

Historic District. A historic district is a cohesive body of resources unified by place, time, theme, and historical trends. Further, that body must be historically significant. The area within the historic district cannot have been disrupted by significant modern intrusions, and the district should convey a sense of the past. Most but not all the resources within the district must be contributing elements. Types of districts include National Historic Landmark and National Register. Presently, Central City, Black Hawk, Gregory Gulch, and the mouth of Chase Gulch are within the Black Hawk-Central City National Historic Landmark district (5GL.7). The built environment and mining landscape are qualities defining the district. To contribute to the NHL, individual resources must either be a component of the historic landscape or be sufficiently preserved on an archaeological level or better, and date to the specified Period of Significance, 1859-1920. The same applies to a potential National Register district, with the Period of Significance being 1859-1941.

National Register of Historic Places (NRHP). Resources are eligible for the NRHP when they fulfill at least one significance Criterion and retain sufficient integrity. Resources may be eligible under NRHP Criterion A when associated with events and trends important on national, state, or local levels. Association can only be determined when a resource's timeframe is known. Resources could be eligible under NRHP Criterion B if historically important individuals directly participated in a site's operation and use, or spent appreciable time on the property. Mere investment in a mining operation or belonging to a company is too indirect an association for eligibility under Criterion B. Resources can be eligible under NRHP Criterion C when they soundly represent an important resource type or possess significant attributes. Resources eligible

¹ McClelland, et al., 1999:1.

under Criterion D must offer information important to the understanding of prospecting, mining, life on the mining frontier, or other areas of study. Sources of information can include surface materials, intact underground mine workings, and buried archaeological deposits and features. For the purpose of determining eligibility, the researcher must explain why the potential information is important and the arenas of research it can address. NRHP Criterion G applies to resources less than 50 years old. They must, however, be exceptionally important in type, events, or historical trends.

State Register of Historic Properties (SRHP). The SRHP applies only to resources in Colorado but largely parallels the NRHP in registration requirements and structure. The principal difference is that NRHP Criterion D acknowledges sites with a high potential to yield important information while SRHP Criterion D is reserved for sites of geographic importance. SRHP Criterion E, however, is identical to NRHP Criterion D.

Heritage Tourism Potential. Even if a resource in open space does not qualify for one of the above official designation programs, it may have value for heritage tourism development. Such resources could be individually interpreted with signage or a pamphlet, or be a prompt that helps highlight larger topics of interest.

CHAPTER 3: PHYSICAL ENVIRONMENT

In location and natural qualities, Chase Gulch and Maryland Mountain are a good example of the environment that makes up greater Gilpin County's mining area. Their location adjacent to and northwest of Black Hawk is ideal for protection, public access, and sensitive recreational development. Maryland Mountain stands in the south half of Section 1, while Chase Gulch descends through the north half of Section 12, T. 3 S, R 73 W. Together they occupy approximately one square mile. Natural qualities are important because they are fundamental to how the area takes form as a historic landscape.



Figure 3.1: In the northwest overview, Maryland Mountain is the pyramidal peak center-right, and Chase Gulch is visible at center. Black Hawk is in the foreground. The Continental Divide is in the far background.

Maryland Mountain is a massive pyramidal landform 1,000' high and one-by-one-half miles in area, oriented roughly east-west. The North Fork of Clear Creek flows through a narrow gulch wrapping around its east and north sides. Highway 119 follows the creek floor on its route to Boulder County. Chase Gulch joins the North Fork at the mountain's southeast toe, a pronounced topographic extension. The drainage, and Black Hawk with it, continues southward. Chase Gulch ascends gently west-northwest approximately one mile to Castle Rock, a large granite pinnacle, and then abruptly curves north and veers northwest. Maryland Mountain, as can

be guessed, serves as the gulch's high and extremely steep north wall. The gulch's south side is comprised of (east to west), Bates and Winnebago hills. Both are very steep but only half as high as Maryland Mountain. Gregory Gulch, which is occupied by Black Hawk and Central City, is the next drainage to the south. Negro Hill stands west of Maryland, on the opposite side of Chase Gulch, and rises almost as high. The historic resource study discussed here covered Maryland Mountain and Chase Gulch from its mouth in Black Hawk to a short distance beyond the Castle Rock curve.

The mountain and gulch form a northeast section of the greater Central City Mining District's economic geology. Prospectors found rich but shallow placer gold deposits in Chase Gulch and on the North Fork in 1859 and worked them to exhaustion within several years. The gold had eroded out of a series of closely spaced quartz veins trending east-northeast throughout the region's granite, some veins also cutting the basement rock which lies to the northeast. Prospectors searched for the parent veins as early as 1859, at first naming the gulch "Quartz Valley" after the lustrous veins and float (broken specimens scattered on the surface) visible in its walls. But hardrock prospecting really got underway during the early 1870s. During this time, prospectors staked most of the area's claims, and mining outfits began substantive development, revealing the general trend of the area's veins and the distribution of those bearing ore. The northeast-southeast pattern governed claim orientation, direction of mine workings, and patterns of prospect workings. All elements are abundantly reflected in the landscape today.

Sixty years of heavy land use affected the environment and shaped its recovery. Placer miners disrupted riparian corridors, mining companies and freight traffic caused extensive erosion, and local interests stripped away all but the smallest trees. The area did recover, however, and the present ecosystems approximate the original conditions. Lying at the intersection of three vegetation zones, the gulch and mountain are ecologically rich with numerous, interesting microenvironments nested inside of larger localized natural areas. The microenvironments are important because they provide setting for, and influence the feeling of, the historic resources in both positive and negative ways.

Maryland Mountain's south and west sides were least affected by logging and mining, hence appearing largely as they did during the mining boom. The mountain's south face is a rugged mix of granite outcrops, extremely steep sandy slopes, Gambel oak brush colonies, and stands of ponderosa pines with some remaining old-growth. The west side is less steep and features original open meadow, fewer outcrops, and combination pine and fir forest. Stands on the upper half are mature with some old-growth amid the outcrops, while thick, young, unhealthy doghair forest has overtaken the lower half. On the gulch floor below, lush meadow has replaced what had been low piles of sandy placer tailings. The stream itself is lined with dense arctic willows. The mountain's north and east sides are more characteristic of the regrowth common to formerly clearcut mining districts. Thick doghair forest of spindly trees begins on the bank of the North Fork and ascends the mountain's extremely steep slopes, gradually thinning amid bedrock spires and masses near the summit. The mountain is crowned with irregular bedrock formations that form a microenvironment. The sand castle-like formations feature clefts, niches, and fissures hiding old-growth ponderosas and a pack trail ascending to a survey station on top. The station has been in use for more than a century because of its 360 degree view.

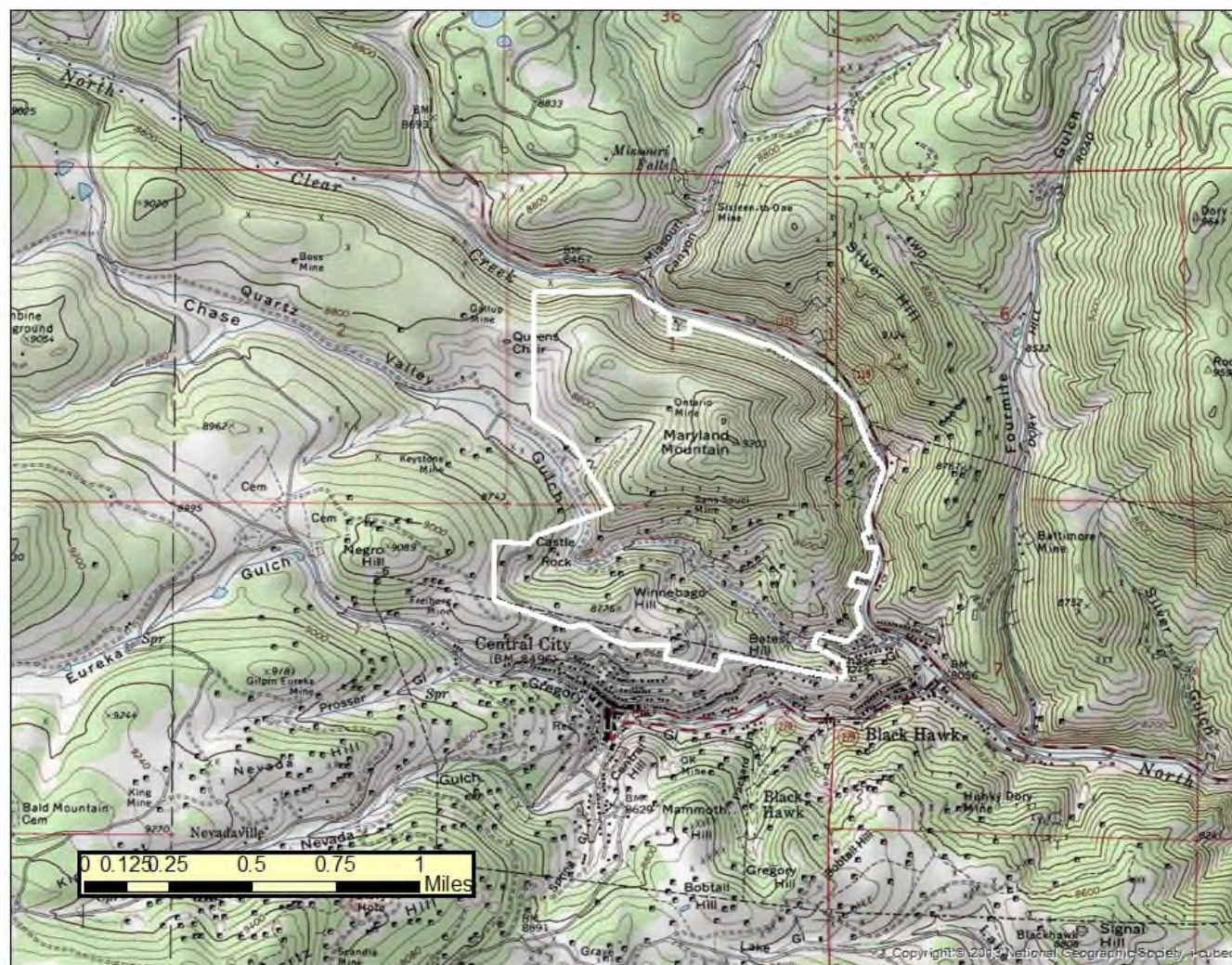


Figure 3.2: Overview map of open space and the project area, outlined in white. Maryland Mountain is at center and Chase Gulch is below.

Several distinct rock formations around the mountain's south base provide interesting texture to the landscape. Granite outcrops and two large spires form a gateway to Chase Gulch, abruptly separating Black Hawk's built environment from a more natural environment. Granite cliffs, boulders, and sheer faces midway up the gulch create an important local landmark and provide drama for neighboring mine sites and the Gilpin Tramway railroad grade. Castle Rock, at the mountain's southwest base, is an impressive pinnacle 150' high serving as another landmark for context and scale. The formation is a western gateway where the gulch quickly changes character, opening into the meadow section noted above.

Surrounded by high landforms and steep walls, Chase Gulch proper feels narrow, deep, and dark. Topographic undulations, numerous outcrops and spires, and thick forest along the floor keep the viewshed closed-in with occasional glimpses of higher mountainsides and their mines. Each turn in the gulch is its own microenvironment rich with historic resources. Bates and Winnebago hills, named "Casto Mountain" during the 1860s, are smothered in at times impenetrable third-growth doghair pine and fir forest, having been logged at least twice before. The forest creates a sense of seclusion, hush, and discovery for those passing through. The gulch has a stand of well-spaced and mature spruce trees surrounded by aspen beneath Castle Rock, and then opens up. Quartz Creek flows year round in a recessed channel meandering through a riparian corridor on the gulch floor, rarely more than 150' wide. At one time, the floor featured low piles of placer tailings, but 130 years of storm wash has flattened and paved them with around 2' of sediment. Historically, the original Chase Gulch Road crossed the creek numerous times in its ascent from Black Hawk, passing through numerous mines along the floor. Most of the road sections have since been lost to storms and thick vegetation. During the 1960s or 1970s, present-day Chase Gulch Road was bulldozed along the gulch's north side and now serves as the main open space walking trail.

CHAPTER 4: INVENTORY RESULTS

The 2014 survey served as a screening tool, identifying significant resources and areas with landscape and district potential for planning and management. It revealed that the only substantial concentration of historic resources is found in Chase Gulch. The remainder of open space lands contain scattered prospects and a few mines with poor integrity. Many of the gulch's resources are individually significant, and the overall concentration is not only a good historic landscape, but also has the potential for official designation as a historic district. When this became apparent, work shifted from basic survey to quantification, in order to bring the gulch's potential to light. In total, 85 prospects, mines, mill sites, and other resource types were either inventoried for the first time or recorded again because previous work was cursory and insufficient. A substantial 67 are contributing elements of the landscape, and of these, 32 are also likely eligible for listing on the National Register of Historic Places, and 2 for the State Register of Historic Properties. The information came from four sources: overview inspection from vantage points, intensive inventory for the BLM Land Disposal, Basic Inventory of Black Hawk property, and results of the 2005 URS inventory and a few earlier projects.

This chapter provides an overview summary of the open space survey followed by detailed discussions of the principal resources. Figures 4.1 – 4.4 plot the resources, labeled by Office of Archaeology and Historic Preservation site numbers, and Table 4.1 lists them along with their attributes.

Open Space Survey Summary

Mountain States Historical (MSH) first scanned Maryland Mountain's four sides from vantage points to locate visually prominent resources, and mine waste rock dumps in particular. Prominent dumps are typically a solid indication of substantial mines, which in turn are often surrounded by smaller scale resources such as prospects, roads, and residential complexes. No substantial clusters of activity were observed on the mountain's north face, while a few prospects lay high on the east face and several tunnel mines were observed along the east base. The west side was similar, with a few prospects high up and handful of tunnel mines along the base. The south face's upper half was nearly barren but the lower half, facing Chase Gulch, contained a continuous series of mines and the distinct Gilpin Tramway railroad bed.

Around the same time, MSH intensively inventoried the Section 12 BLM tracts for the Land Disposal. Intensive inventory required 100 percent foot survey and detailed documentation of all cultural resources ranging from isolated artifacts to large mine complexes. The tracts were a series of elongated slivers along Chase Gulch's south wall and to a lesser extent the north wall. The overview inspection and coverage of BLM tracts guided the Basic Inventory foot survey.

Several zigzag transects covered the mountain's north face, while tighter transects provided the opportunity to inspect the east face. MSH walked the mountain's entire west side in detail and carefully examined the terrain extending northwest and southwest. Prominent points and the mountain crest were also surveyed for evidence of stations historically used by mineral surveyors locating claims from afar, a necessary and frequent activity in mining districts. MSH also walked the mountain's entire south side.

The survey revealed that Chase Gulch contains nearly all of the principal resources in open space. A continuous series of mines and prospects lines the gulch's south wall (Winnebago and Bates hills), and a slightly thinner group lines the north wall (south side Maryland

Mountain). Four ore treatment mill sites, as well as a placer mine, dam for waterpower, and foundations for a workers' housing complex are scattered along the gulch floor. Segments of historic Chase Gulch Road, feeder roads to mines, and the Gilpin Tramway bed form a transportation network in the gulch. Clearly, Chase Gulch was an important center of mining and bears evidence of this activity to this day. All resources on BLM tracts, and all the principal resources outside the tracts, were inventoried and are discussed in detail below. Minor resources lying outside the tracts (such as prospects) were not inventoried.

Maryland Mountain's east side had a limited assemblage of mines and prospects, most of which were located along the base fronting the North Fork. Few were substantial or preserved enough to document. The remainder are small, overgrown, collapsed, and difficult to perceive. The Midas Tunnel (5GL.739), Brack Hollow Tunnel (5GL.2216), Josephine Mine (5GL.730), and Gilpin Tramway railroad (5GL.2104.1) were inventoried because they form a small-scale landscape in themselves. Although isolated along the North Fork, the assemblage should be considered in open space planning. The Mary Ella No.2 (5GL.721) is the only mine visible higher up on the mountainside. Although a few prominent mines line the east side of the North Fork, they were not surveyed because they are thickly overgrown and nearly invisible, and lack integrity. The greater North Fork gulch could have landscape and district potential, but this needs to be determined through additional survey work.

The mountain's west base, fronting Quartz Creek, features a series of tunnels, as well as foundations for the Tucker Mill. These were left out of the project because they will be affected by a proposed reservoir. Cultural resource firm ERO Resources is, however, conducting a Section 106 inventory of the reservoir's footprint. ERO will be evaluating the sites in that location for significance individually and as a historic landscape. URS covered the ground higher on the mountainside in 2005, documenting a few clusters of small, difficult-to-perceive prospects offering little landscape or district potential.

Resource Summaries

Below are summaries of each resource recorded on Maryland Mountain and in Chase Gulch. Each entry covers content, condition and integrity, and significance in terms of NRHP and the historic landscape. The summaries also include sections on heritage tourism potential and management guidance. It should be noted that the information is presented in two styles. Resource descriptions from the Land Disposal work tend to be more detailed. The text comes from that project's Section 106 compliance report, and reflects those requirements. Descriptions of sites included in the Basic Inventory are sparser but sufficient to provide a clear understanding of each resource.

Table 4.1: Chase Gulch and Maryland Mountain Historic Resource Summary

OAHP #	Resource Name	Resource Type	Potential District Status	Historic Landscape Status	Individual Eligibility Status	UTM Coordinate (NAD 83)	Geographic Location
5GL.7.11	Robert Emmett Shaft	Shaft Mine	Contributing	Contributing	NRHP A, C	456700 mE 4406522 mN	Maryland Mtn, south flank
5GL.7.12	Belden Tunnel	Tunnel Mine	Contributing	Contributing		456179 mE 4406523 mN	Winnebago Hill, north base
5GL.295	Maryland Mine	Stope Mine	Contributing	Contributing		456806 mE 4406477 mN	Maryland Mtn, south flank
5GL.297	Allie Mine	Tunnel Mine	Contributing	Contributing	NRHP A, C	456287 mE 4406598 mN	East of Castle Rock
5GL.298	Castle Rock Mine	Shaft Mine	Contributing	Contributing	NRHP A, C	456050 mE 4406588 mN	Castle Rock
5GL.299	Ellery Mine	Shaft Mine	Contributing	Contributing		456169 mE 4406491 mN	Winnebago Hill, north base
5GL.300	First Centennial Shaft	Shaft Mine	Contributing	Contributing	NRHP A, C	456255 mE 4406455 mN	Winnebago Hill, north flank
5GL.301	Queen of West Mine	Shaft Mine	Contributing	Contributing		456395 mE 4406395 mN	Winnebago Hill, northeast flank
5GL.302	Sans Souci Mine	Shaft Mine	Contributing	Contributing		456489 mE 4406695 mN	Maryland Mtn, south flank
5GL.7.13 5GL.398	Troublesome Mine	Shaft Mine	Contributing	Contributing		455867 mE 4406273 mN	Winnebago Hill, northwest shoulder
5GL.613	South Bend Mine	Prospect Adit				457016 mE 4406117 mN	Maryland Mtn, southeast base
5GL.616	Golden Gilpin Mill	Mill (complete)	Contributing	Contributing	NRHP A, C, D	457371 mE 4406373 mN	Maryland Mtn, southeast base
5GL.644	Smith Mine	Stope Mine	Contributing	Contributing		457188 mE 4406150 mN	Maryland Mtn, southeast base
5GL.720	Second Discovery of Virginia	Prospect Complex	Contributing	Contributing		456890 mE 4406689 mN	Maryland Mtn, southeast extension
5GL.721	Mary Ella No.2 Mine	Shaft Mine				457054 mE 4406746 mN	Maryland Mountain, east flank
5GL.722	Greenside Prospect Shaft	Prospect Shaft	Contributing	Contributing		456501 mE 4406576 mN	Maryland Mtn, south base
5GL.723	Centennial Extension Mine	Stope Mine	Contributing	Contributing		456505 mE 4406575 mN	Maryland Mtn, south base

OAHP #	Resource Name	Resource Type	Potential District Status	Historic Landscape Status	Individual Eligibility Status	UTM Coordinate (NAD 83)	Geographic Location
5GL.724	Virginia Shaft	Shaft Mine	Contributing	Contributing	SRHP C	456478 mE 4406399 mN	Winnebago Hill, northeast flank
5GL.725	Sarah E. Mine	Tunnel Mine	Contributing	Contributing	NRHP A, C	456288 mE 4406744 mN	Maryland Mtn, southwest flank
5GL.728	Queen's County Mine	Shaft Mine	Contributing	Contributing		457323 mE 4406946 mN	Maryland Mtn, east base
5GL.730	Josephine Mine	Tunnel Mine	Contributing	Contributing		457320 mE 4406775 mN	Maryland Mtn, east base
5GL.732	Ninety Four Mine	Tunnel Mine				457323 mE 4406687 mN	Maryland Mtn, east base
5GL.733	Road or Elephant Shaft	Shaft Mine	Contributing	Contributing	SRHP C	456855 mE 4406275 mN	Maryland Mtn, south base
5GL.739	Midas Tunnel	Tunnel Mine	Contributing	Contributing	NRHP A, C	457360 mE 4406825 mN	Maryland Mtn, east base
5GL.2104.1	Gilpin Tramway	Railroad	Contributing	Contributing	NRHP A, C, D	457435 mE 4406937 mN 456581 mE 4406165 mN	Chase Gulch, north and south sides
5GL.2126.2	Chase Gulch Road	Wagon Road	Contributing	Contributing	NRHP A, C, D	455972 mE 4406610 mN 456145 mE 4406515 mN	Chase Gulch, west side, dam to Nelson
5GL.2148	Mine, Name Unknown	Shaft Mine	Contributing	Contributing		455619 mE 4406463 mN	West of Nelson Property
5GL.2149	Prospect Complex	Prospect Complex				455701 mE 4406478 mN	West of Nelson Property
5GL.2150	Oro Mine	Tunnel Mine	Contributing	Contributing	NRHP A, C	455700 mE 4406395 mN	In drainage southwest of Nelson Property
5GL.2151	Oro Mine Road	Wagon Road	Contributing	Contributing	c	455825 mE 4406467 mN 455699 mE 4406407 mN	From Nelson Property to Oro Mine
5GL.2152	Oro Mine Pack Trail	Pack Trail				455710 mE 4406386 mN 455805 mE 4406305 mN	Winnebago Hill, northwest end

OAHP #	Resource Name	Resource Type	Potential District Status	Historic Landscape Status	Individual Eligibility Status	UTM Coordinate (NAD 83)	Geographic Location
5GL.2153	Nelson Property	Residence				455874 mE 4406528 mN	Chase Gulch floor, west of Castle Rock
5GL.2154	Stamp Mill Foundation	Foundation	Contributing	Contributing	NRHP D	455874 mE 4406528 mN	Chase Gulch floor, Nelson Property
5GL.2155	Central City Dump	Refuse Dump	Contributing	Contributing		455809 mE 4406289 mN	Winnebago Hill, northwest shoulder
5GL.2156	Prospect Complex	Prospect Complex	Contributing	Contributing		455726 mE 4406335 mN	Winnebago Hill, northwest flank
5GL.2159.1	Troublesome Mine Road	Wagon Road				455882 mE 4406280 mN 455964 mE 4406235 mN	Winnebago Hill, northwest shoulder
5GL.2160	Robert Ingersoll Placer Ditch	Water Ditch	Contributing	Contributing	NRHP A, C, D	455636 mE 4406339 mN 455971 mE 4406231 mN	Winnebago Hill, northwest shoulder
5GL.2161	Robert Ingersoll Placer Pipeline Bed	Pipeline Bed	Contributing	Contributing	NRHP A, C, D	455845 mE 4406420 mN 455980 mE 4406252 mN	Winnebago Hill, up northwest flank
5GL.2162	Robert Ingersoll Placer	Hydraulic Placer Mine	Contributing	Contributing	NRHP A, C, D	455845 mE 4406445 mN	South of Nelson Property
5GL.2165	Prospect Complex	Prospect Complex	Contributing	Contributing	NRHP C, D	455896 mE 4406420 mN	Winnebago Hill, northwest base
5GL.2166	Prospect Complex	Prospect Complex	Contributing	Contributing		455956 mE 4406414 mN	Winnebago Hill, northwest base
5GL.2167	Stamp Mill Remnant	Stamp Mill	Contributing	Contributing	NRHP A, D	455985 mE 4406442 mN	Chase Gulch floor, west of Dam
5GL.2168	Dam	Dam	Contributing	Contributing	NRHP C	456017 mE 4406474 mN	Chase Gulch floor, by Castle Rock
5GL.2169	Belden Mill	Mill	Contributing	Contributing	NRHP A, C, D	456240 mE 4406530 mN	Winnebago Hill, north base
5GL.2170.1	Winnebago Hill Haul Road	Wagon Road	Contributing	Contributing	NRHP A, C, D	456300 mE 4406354 mN 456006 mE 4406432 mN	Winnebago Hill, north flank

OAHP #	Resource Name	Resource Type	Potential District Status	Historic Landscape Status	Individual Eligibility Status	UTM Coordinate (NAD 83)	Geographic Location
5GL.2170.2	Winnebago Hill Haul Road	Wagon Road	Contributing	Contributing	NRHP A, C, D	456140 mE 4406416 mN 456115 mE 4406309 mN	Winnebago Hill, north flank
5GL.2171	Dean Prospect Complex	Prospect Complex	Contributing	Contributing		455982 mE 4406213 mN	Winnebago Hill, west crest
5GL.2172	Queen of the West Tunnel	Tunnel Mine	Contributing	Contributing		456506 mE 4406446 mN	Winnebago Hill, northeast base
5GL.2173	Virginia Mine Road	Wagon Road	Contributing	Contributing	NRHP A, C, D	456461 mE 4406376 mN 456548 mE 4406410 mN	Winnebago Hill, northeast flank
5GL.2174	Prospect Shaft	Prospect Shaft	Contributing	Contributing		456532 mE 4406356 mN	Winnebago Hill, northeast flank
5GL.2176	Maryland Second Discovery Prospect Complex	Prospect Complex	Contributing	Contributing	NRHP C	456406 mE 4406217 mN	Winnebago Hill, northeast flank
5GL.2177	Prospect Adit	Prospect Adit	Contributing	Contributing		456510 mE 4406256 mN	Winnebago Hill, northeast flank
5GL.2178	Mine, Name Unknown	Tunnel Mine	Contributing	Contributing		456522 mE 4406242 mN	Winnebago Hill, northeast flank
5GL.2179	Road or Elephant Prospect Complex	Prospect Complex				456541 mE 4406141 mN	Winnebago Hill, east shoulder
5GL.2180	Aetna Prospect Trench	Prospect Complex				456643 mE 4406256 mN	Winnebago Hill, northeast flank
5GL.2181	Prospect Complex	Prospect Complex				456721 mE 4406093 mN	Bates Hill, north shoulder
5GL.2182	Freedom Tunnel	Tunnel Mine				456815 mE 4406225 mN	Bates Hill, northwest base
5GL.2183	Freedom Tunnel Road	Wagon Road	Contributing	Contributing	NRHP A, C, D	456820 mE 4406211 mN 456922 mE 4406981 mN	Bates Hill, north flank
5GL.2184	Road or Elephant Prospect Complex	Prospect Complex				456879 mE 4406383 mN	Maryland Mtn, south base, tram grade

OAHP #	Resource Name	Resource Type	Potential District Status	Historic Landscape Status	Individual Eligibility Status	UTM Coordinate (NAD 83)	Geographic Location
5GL.2185	Mine, Name Unknown	Shaft Mine	Contributing	Contributing		456887 mE 4406444 mN	Maryland Mtn, south base, tram grade
5GL.2187	Ninety Four Prospect Complex	Prospect Complex				456972 mE 4406418 mN	Maryland Mtn, southeast extension
5GL.2190	Mary Ella No.2 Mine Road	Wagon Road				457212 mE 4406199 mN 457038 mE 4406655 mN	Maryland Mtn, southeast extension
5GL.2191	Ninety Four Prospect Complex	Prospect Complex				457061 mE 4406498 mN	Maryland Mtn, southeast extension
5GL.2195	Prospector's Camp	Prospector's Camp				457221 mE 4406533 mN	Maryland Mtn, southeast flank
5GL.2196	South Bend Prospect Complex	Prospect Complex				457132 mE 4406317 mN	Maryland Mtn, southeast extension
5GL.2197	Billings Mine	Tunnel Mine		Contributing		456966 mE 4406095 mN	Bates Hill, north base
5GL.2198	Casey Street Dump	Refuse Dump				457202 mE 4406945 mN	Bates Hill, north shoulder
5GL.2199	Shelby Tunnel	Tunnel Mine	Contributing	Contributing		456544 mE 4406399 mN	Winnebago Hill, northeast base
5GL.2200	Chase Gulch Brewery	Workers' Housing	Contributing	Contributing	NRHP D	456589 mE 4406385 mN	Winnebago Hill, northeast base
5GL.2201	Union Tunnel	Tunnel Mine	Contributing	Contributing		456615 mE 4406354 mN	Winnebago Hill, northeast base
5GL.2202	Black Quartz Mine	Shaft Mine	Contributing	Contributing		456132 mE 4406420 mN	Winnebago Hill, northwest flank
5GL.2203	Centre Mine: Midlevel Tunnel	Tunnel Mine	Contributing	Contributing	NRHP A, C	456165 mE 4406410 mN	Winnebago Hill, northwest flank
5GL.2204	Centre Mine: Upper Tunnel	Tunnel Mine	Contributing	Contributing	NRHP A, C	456178 mE 4406362 mN	Winnebago Hill, north flank
5GL.2205	Ranney Mine	Shaft Mine	Contributing	Contributing		456100 mE 4406310 mN	Winnebago Hill, northwest crest
5GL.2206	Centennial Tunnel	Tunnel Mine	Contributing	Contributing	NRHP A, C, D	456474 mE 4406543 mN	Winnebago Hill, north base
5GL.2207	Centre Tunnel	Tunnel Mine	Contributing	Contributing	NRHP A, C	456505 mE 4406507 mN	Winnebago Hill, north base

OAHP #	Resource Name	Resource Type	Potential District Status	Historic Landscape Status	Individual Eligibility Status	UTM Coordinate (NAD 83)	Geographic Location
5GL.2208	Robert Emmett Mine: Level 2	Tunnel Mine	Contributing	Contributing		456566 mE 4406460 mN	Maryland Mtn, south base
5GL.2209	Robert Emmett Mine: Level 1	Tunnel Mine	Contributing	Contributing		456642 mE 4406503 mN	Maryland Mtn, south flank
5GL.2210	Workers' Housing	Workers' Housing	Contributing	Contributing	NRHP A, D	456628 mE 4406420 mN	Maryland Mtn, south flank
5GL.2211	Aetna Tunnel	Tunnel Mine	Contributing	Contributing	NRHP A, C	456741 mE 4406294 mN	Winnebago Hill, northeast base
5GL.2212	Aetna Shaft	Shaft Mine	Contributing	Contributing	NRHP A, C	456720 mE 4406620 mN	Winnebago Hill, northeast base
5GL.2213	Bonanza Mine and Mill	Tunnel Mine and Mill	Contributing	Contributing	NRHP A, C, D	456806 mE 4406334 mN	Maryland Mtn, south base
5GL.2214	Road or Elephant Prospect Shaft	Prospect Shaft	Contributing	Contributing		456895 mE 4406372 mN	Maryland Mtn, south flank
5GL.2215	Gettysburg Mine	Shaft Mine	Contributing	Contributing		4577058 mE 4405952 mN	Bates Hill, north shoulder
5GL.2216	Brack Hollow Tunnel	Tunnel Mine	Contributing	Contributing		457326 mE 4406800 mN	Maryland Mtn, east base
Total = 85			Total = 66	Total = 67	NRHP = 32 SRHP = 2		

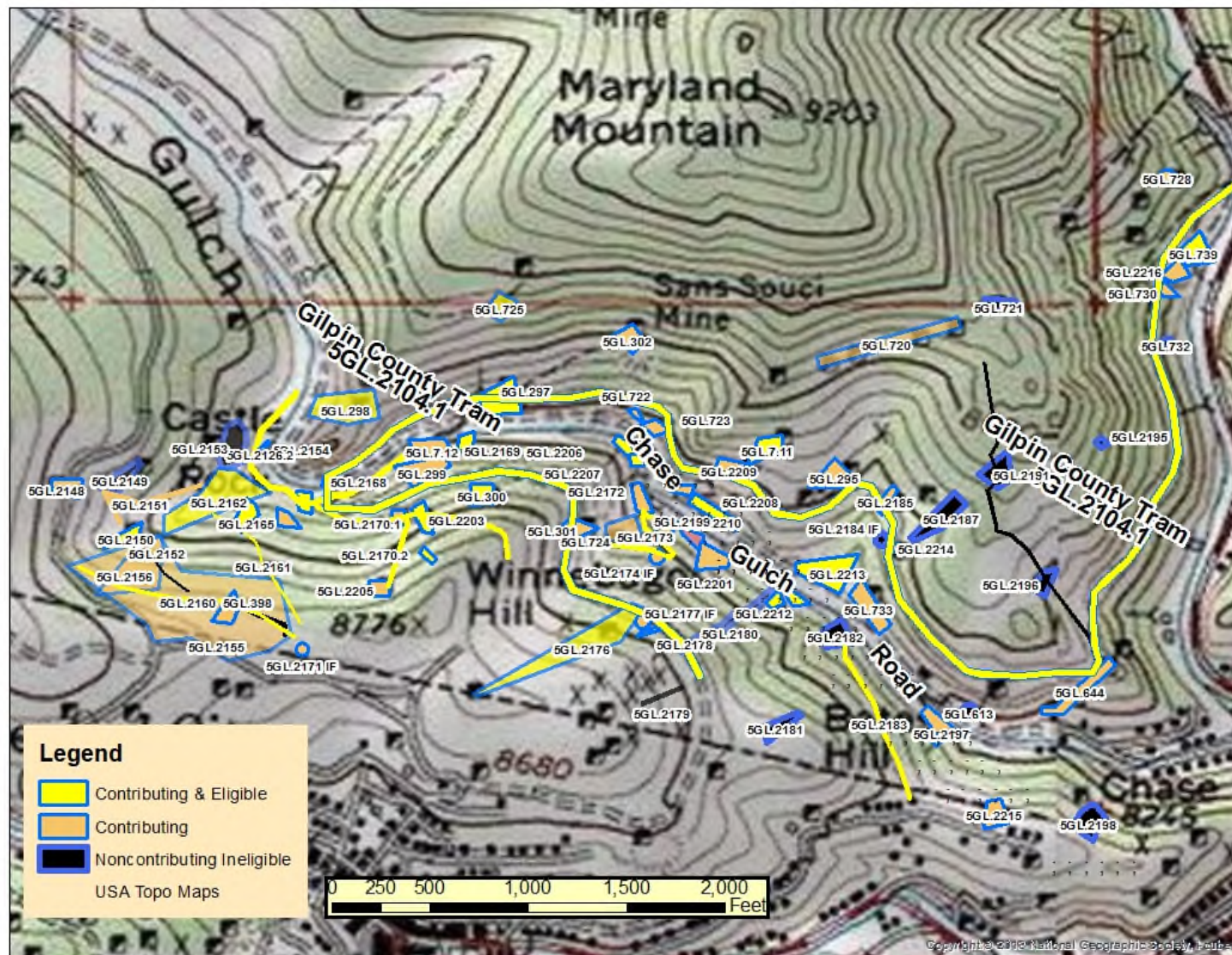


Figure 4.1: The overview map is a GIS version of Central City (7.5'), 1970. The polygons outline inventoried resources. Black Hawk is at lower right and Central City at bottom. See enlargements on following pages for more detail.

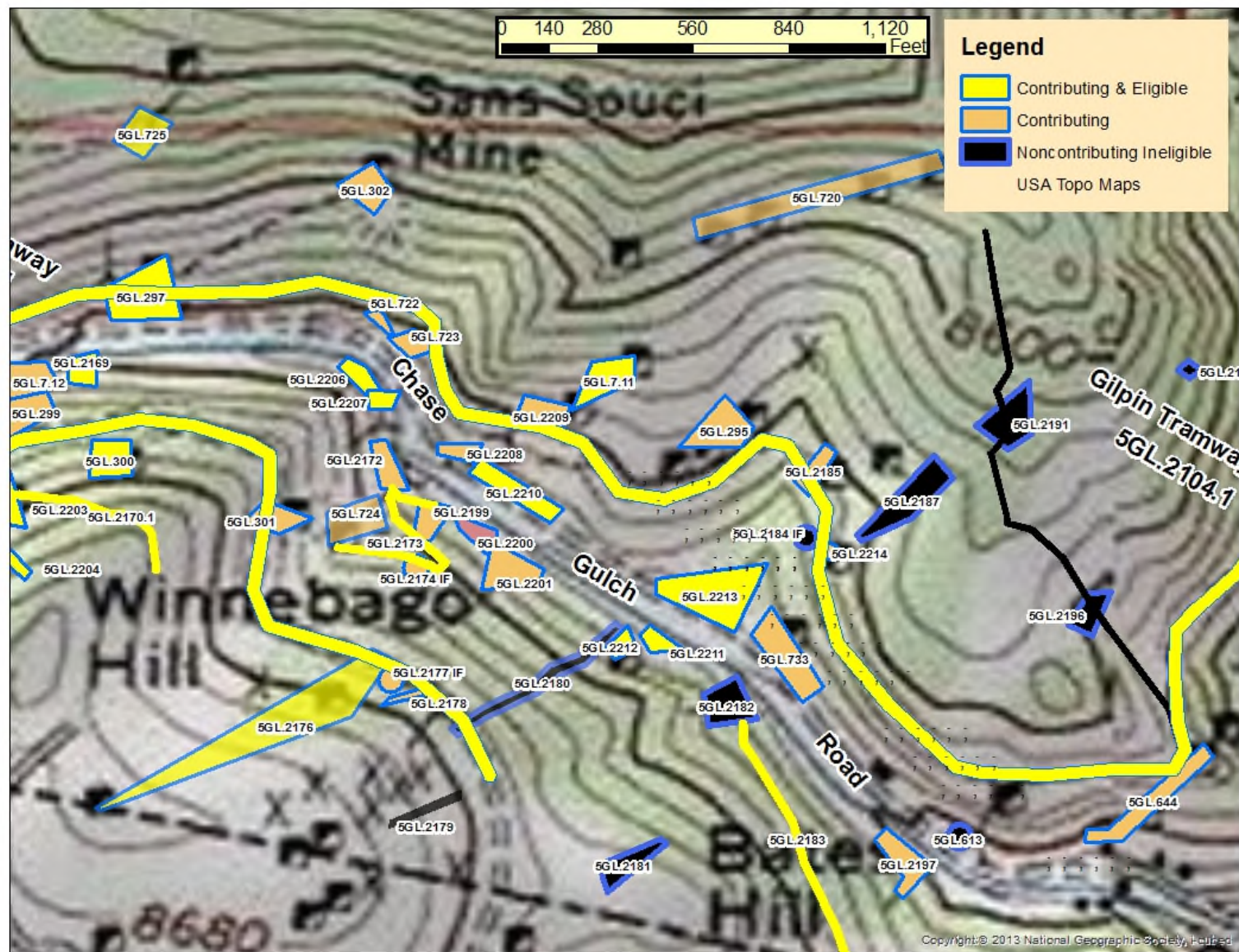


Figure 4.3: Enlargement of Chase Gulch's center portion.

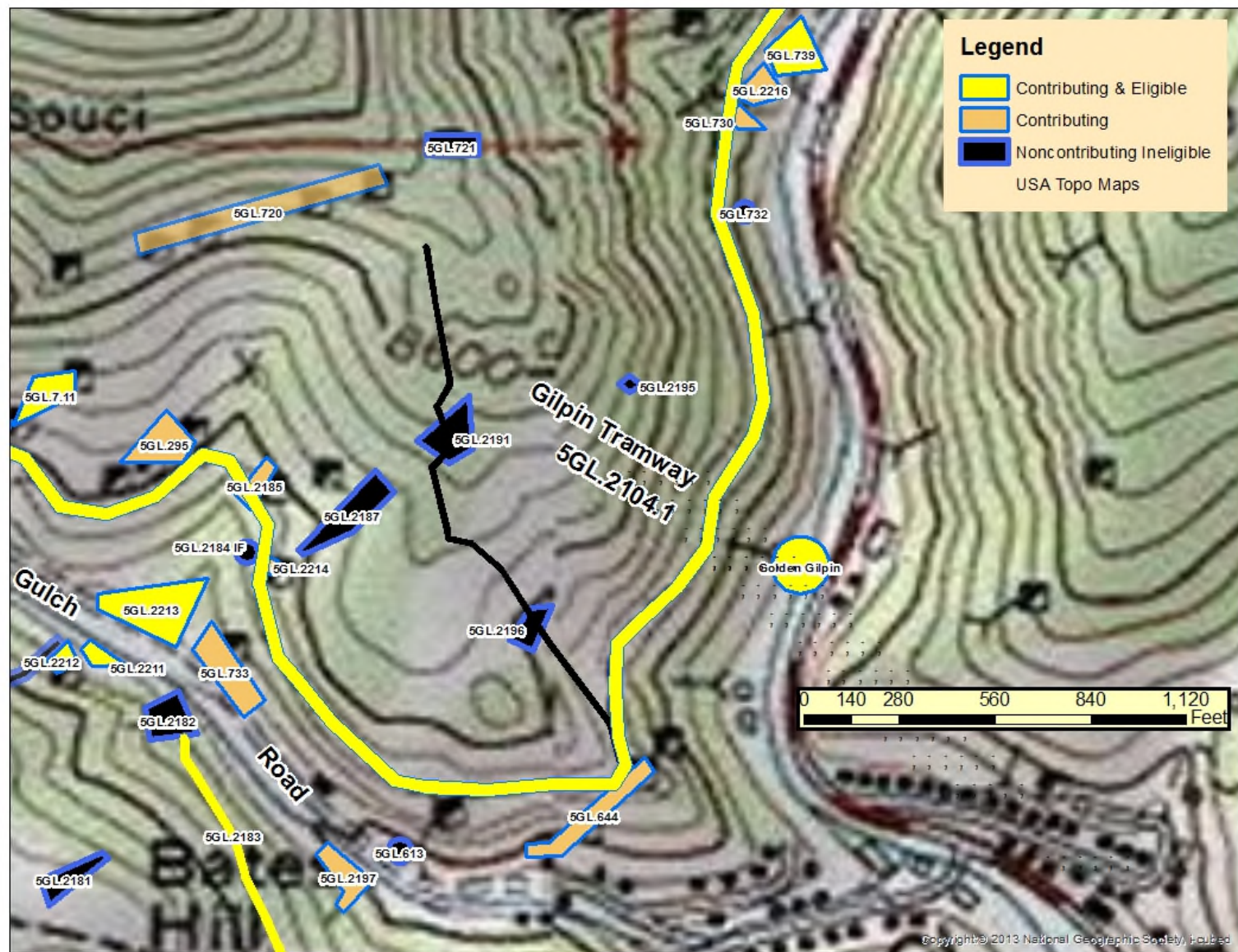


Figure 4.4: Enlargement of Chase Gulch's east end.

Site 5GL.7.11 Robert Emmett Shaft
Project: Basic Inventory

The Robert Emmett Mine was worked intermittently from 1863 through 1918. Central City investors funded development through the Robert Emmett Shaft (5GL.7.11), Level 1 tunnel (5GL.2209) around 100' below, and Level 2 tunnel (5GL.2208) another 100' farther down Maryland Mountain's south flank. When the vein's upper reaches became exhausted by the 1890s, activity centered on the shaft, which then became the most important point of production.

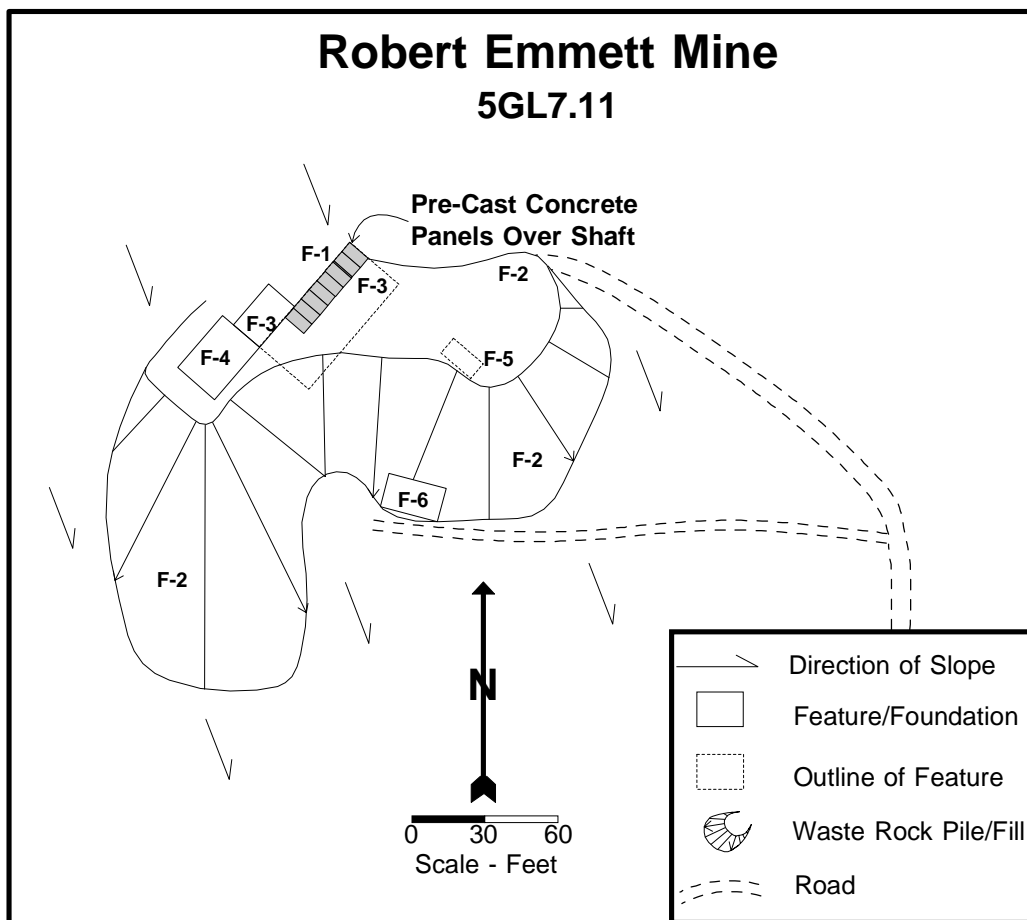


Figure 4.5: Plan view of the Robert Emmett Shaft, 5GL.7.11.

Robert Emmett Shaft Description

Historically, miners sank the shaft directly down into the vein and then cut a broad platform from bedrock for surface facilities. In 1896, they installed a shaft house on the flat area, which enclosed a steam hoisting system, blacksmith shop, air compressor, and boilers. Workers also erected an ore bin on the flank of the waste rock dump, substantial in size by that time.

The shaft complex is presently an archaeological resource both contributing to the landscape and potentially eligible for the NRHP and SRHP. All buildings, structures, and

equipment were removed long ago, leaving an interpretable assemblage of archaeological features and full artifact assemblage.

When the mine was abandoned, the shaft (F1) took form as a large opening and a stope around 5' wide and 40' long near the platform's center. In 1987, DRMS capped the stope with concrete panels in a neat, northeast row.

Using ore cars on a track, miners dumped waste rock southeast and southwest. Over time, they built up a crescent-shaped bench (F2) 102'x200' in area and 12' thick, grading the top surface flat. The dump presently features original profile, footprint, and surfaces, although the portion near the shaft was scraped by a bulldozer.

A platform (F3) for the shaft house is clearly evident, consisting of both the bedrock cut and a waste rock pad. According to the platform, the building was L-shaped and 24'x56' in plan. The L's main portion was 24'x56' in plan and housed the hoisting system and compressor. The hoist foundation is no longer apparent but the compressor foundation is, manifesting as a concrete pad 8'x9' in plan in the platform's northeast end. The L's small leg was 14'x22' in area and housed the shop. A well-preserved dry-laid rock forge and rich artifact assemblage define the extension.

A separate frame building was attached to the shaft house. Waste rock berms, which at one time supported wall footers, outline its 20'x28' in area footprint (F4). An extensive deposit of boiler clinker extends southwest and downslope. The mine's boiler (F5) was west of the shaft house. It was a return-tube in type, consisting of a boiler shell with plumbing in a brick façade. Everything was removed except for the foundation and a scatter of bricks.

The mine's ore bin (F6) was a sloped-floor type at the base of the dump. Professionally built, the structure was 14'x24' in plan and around 12' high with four separate cells, each for a specific grade of ore. The walls consisted of 2" thick planks and a post-and-girt frame of 6"x6" timbers, and the floor 3" planks supported by 8"x8" timbers. The frame was bolted together. Over time the structure collapsed and is now a ruin.

The site possesses a good artifact assemblage characteristic of mechanized shaft mines. Structural materials are distributed around the shaft, across the dump, and amid the ore bin ruin. Timbers from the hoisting system's headframe lie on the dump's east end. A variety of industrial refuse is concentrated around the shaft house platform and includes shop debris, pipe fittings, machine parts, and general hardware. Taken together, wire nails, aqua and amethyst glass, rubberized canvas air hoses, and the use of steam reflect an age range spanning the 1890s-1910s. Buried archaeological deposits are unlikely because the deposition environment of steep slopes and thin soil is not conducive.

Robert Emmett Shaft Condition and Integrity

In condition, the resource is preserved on an archaeological level. Archaeological features clearly represent the mine's principal surface plant components, and convey some detail regarding a few specific facilities. The shaft was capped with concrete panels in 1987, and the waste rock dump's northeastern surface was scraped at this time. But the rest of the dump has its original surfaces, footprint, and profile. Gambel oak and evergreen saplings are starting to overtake level areas.

The resource possesses fair integrity on an archaeological level. The feature assemblage conveys design of the overall surface plant, as well as details of the compressor foundation, boiler setting, shop, and ore bin. The archaeological features are, however, insufficient alone for

integrity of materials and workmanship. The resource also has integrity of feeling and association, and lies in an intact setting.

Robert Emmett Shaft Significance

The Robert Emmett Shaft is significant as a prominent landmark and potentially eligible for the NRHP and SRHP in itself. The resource is a landmark because it is one of the largest and most visible mines on Maryland Mountain's south flank, helping to define the northern extent of productive operations in Chase Gulch.

Regarding potential eligibility, the resource can qualify under NRHP and SRHP Criteria A and C in the areas of Industry and Engineering. The shaft was among the most productive operations in Chase Gulch, and the site is a good archaeological example its resource type.

The site was registered as a historic resource three times in as many decades, but none of the efforts provided meaningful documentation, NRHP eligibility evaluation, or an objective statement of significance. OAHF provided cursory documentation and registered the site in 1983 as 5GL.7.11 when considering its potential for inclusion in the Central City – Black Hawk National Historic Landmark District (NHL). OAHF determined the site ineligible because it lacked a complete group of standing buildings, ignoring the intact assemblage of archaeological features. DRMS closed the shaft as noted above in 1987, adding nothing to the site record. In 2000, Heritage Research Center reevaluated the site for Central City and also added nothing of substance to the record.

Robert Emmett Shaft Management Recommendations

- Intensive site documentation and archival research, including objective significance evaluation. Necessary for heritage tourism and reversal of current ineligible status.
- Reverse current ineligibility status.
- Thin vegetation on dump and around shaft house platform. Use caution to minimize disturbance.
- Improve/clean blacksmith shop features (under qualified archaeological monitor).
- Interpret with signage or other media. Adapt existing access road into trail from Gilpin Tramway bed below.
- Ore car chassis on-site may be at risk for theft. Discuss best approach for securing.

Robert Emmett Shaft Heritage Tourism Potential: High

Interpret Site. Although presently strenuous to access, the site should be interpreted because of its importance and education potential. Signage would explain the site's history, surface facilities, and circa 1900 mining technology.

Access Trail. Presently, a steep road ascends to the site from the tram bed. Adapt the road into an access trail.

Site 5GL.7.12 Belden Tunnel
Project: Land Disposal

Resource Type: Tunnel Mine

A tunnel mine was an operation where a vein was undercut with a horizontal tunnel and then worked from the bottom up. Ore blasted from the vein tumbled into underground bins, and was tapped into ore cars below. Miners then pushed the cars out the tunnel and to the surface. A haulageway was a type of tunnel specifically designed to penetrate multiple veins, and facilitate a flow of ore out. Haulageways therefore tended to be wide, straight, and well-engineered. They also had ore bins on the surface for payrock storage.

The Belden Tunnel was a haulageway bored south through Winnebago Hill to undercut a series of veins. David D. Belden sited the tunnel in Chase Gulch at Winnebago Hill's northwest base, adjacent to the Belden Mill (5GL.2169). When the tunnel was started in 1875, the mill was in place but apparently idle. Though it could have been adapted to treat ore from the Belden operation later on, intensive archival research found no link between the two. The tunnel is also located adjacent to and north of the Ellery Shaft (5GL.299), which was initially worked through the tunnel. Elevation is 8,450' and the tunnel is located on a steep, north-facing slope, with Quartz Creek trickling past the waste rock dump's toe. The area was clearcut during the mining boom and has since been overtaken by doghair fir and lodgepole pine forest thick enough to confound photography. Most of the site is found within a BLM tract.

The site was previously recorded for two projects. In 1982, OAHF completed simple documentation in consideration of including the site in an expanded NHL district. OAHF thus applied the resource number 5GL.7.12 to reflect the NHL's master 5GL.7. The site was

determined ineligible despite the lack of supporting information, and the NHL was never expanded. The National Park Service reevaluated the site in 1987 for like reasons, with the same result. Heritage Research Center reevaluated the site again in 2000. All efforts were insufficient, with low-quality site forms the only product. The site has now been properly recorded for the Land Disposal.

Belden Tunnel History

During the Central City district's initial period of hardrock discovery, prospectors unearthed a series of veins crossing northeast-southwest through Winnebago Hill's center. They claimed several as the Black Quartz, Ranney, and American River (named after the California gold center) in 1864. David D. Belden apparently staked an additional vein as the Belden & Tennal. All were developed to some degree through shallow shafts and then abandoned when their free-gold ore was exhausted. Belden, however, intuited that the veins offered complex ore at depth, and would be valuable in the future. He thus set about buying the claims as they came available during the late 1860s, using money from three sources. He was among the earliest to stake a claim on the famed Bobtail Vein. He also ran a store in Gregory Gulch, and managed the Smith & Parmalee Gold Mining Company, which was one the better gold outfits in the district. Even so, Belden lacked enough capital to actually develop his acquisitions.

In 1875, Belden convinced friends Frederick Kruse and Alonzo Fernald to support a venture to undercut Winnebago Hill with the Belden Tunnel. He claimed that the operation would be founded in sound economics. The tunnel would undercut the veins he owned and likely

penetrate hidden, or blind, ones as well, and allow them to be worked from the bottom up. The trio organized the Belden & Tennial Mining Company, secured investors, installed an air compressor and boiler, and went to work.²

The tunnel got off to an excellent start. Among the earlier companies in the mining district to use rockdrills, the company quickly bored the tunnel a mere 120' and encountered the first of Belden's forecasted blind veins. He claimed it as the George W. Ellery, drove a drift southwest along the vein, and began extracting a welcome \$4,000 in gold per month. Miners bored onward on 1876 and 1877, undercutting the Black Quartz 235' in and soon after discovering the Alonzo Fernald, the second blind vein. These also began yielding good ore.³

By 1883, the tunnel was 600' long and had produced \$250,000. In addition to the above veins, it also passed through the Herbert Spencer (also blind), Ranney, and Belden & Tennial. When the best ore had been exhausted, the company enacted two policies to maintain income. First, it leased out undeveloped ground to independent miners, who were better at secreting out and extracting subtle ore stringers. Second, they leased veins from companies near the tunnel's end and worked these from the bottom up. The split system worked until around 1884, when the ore ran out and the company suspended operations.⁴

The company apparently had no money despite its handsome production figures, and needed more capital for further development and a new mill. The directors reorganized as the Winnebago Mining Company and tried selling stock to raise the necessary funds. Belden and the company received neither, and the tunnel remained idle for more than a decade, despite several attempts to resuscitate it.

Belden finally persevered in 1901 and reopened his tunnel. By this time, improved milling technology had rendered the low-grade ore that remained underground profitable to extract. Belden thus installed new machinery and worked both the tunnel and Ellery Shaft for several years. The veins, however, lacked enough ore to support substantial operations, so he scaled back and leased the mine to independent parties. They produced small batches of ore until 1917, when even the small stringers were gone.⁵

Belden Tunnel Description

As a historic resource, the Belden Tunnel has suffered substantial disturbance and no longer conveys its history or physical makeup. Sometime during the 1970s or 1980s, the property owner attempted to reopen the tunnel, scraping the waste rock dump with a bulldozer and depositing long mounds of new waste rock on its surface. The activity affected the site's most important portion, where the surface plant at one time stood.

In particular, the owner cleaned out the tunnel's collapse zone (F1), creating a ragged trench 36' wide and 126' long with headwall 28' high. Needless to say, the tunnel now has no integrity as a historic feature. During the work, the owner piled rubble and debris in two long berms 6' high on both sides of the trench.

² Cushman and Waterman, 1876:93; *Rocky Mountain News* 8/13/76 p2 c3; *Rocky Mountain News* 8/26/76 p2 c3; Wickersheim and LeBaron, 2005:169.

³ Cushman and Waterman, 1876:93; "Mining News" *EMJ* 11/10/77 p351; "Mining News" *EMJ* 11/24/77 p388; *Rocky Mountain News* 2/5/76 p4 c2; *Rocky Mountain News* 8/1/76 p4 c5.

⁴ *Colorado Mining Directory*, 1883:264; *Rocky Mountain News* 7/19/84 p3 c1.

⁵ "Mining News" *EMJ* 12/16/16 p1078; State Bureau of Mines, 1901:76.

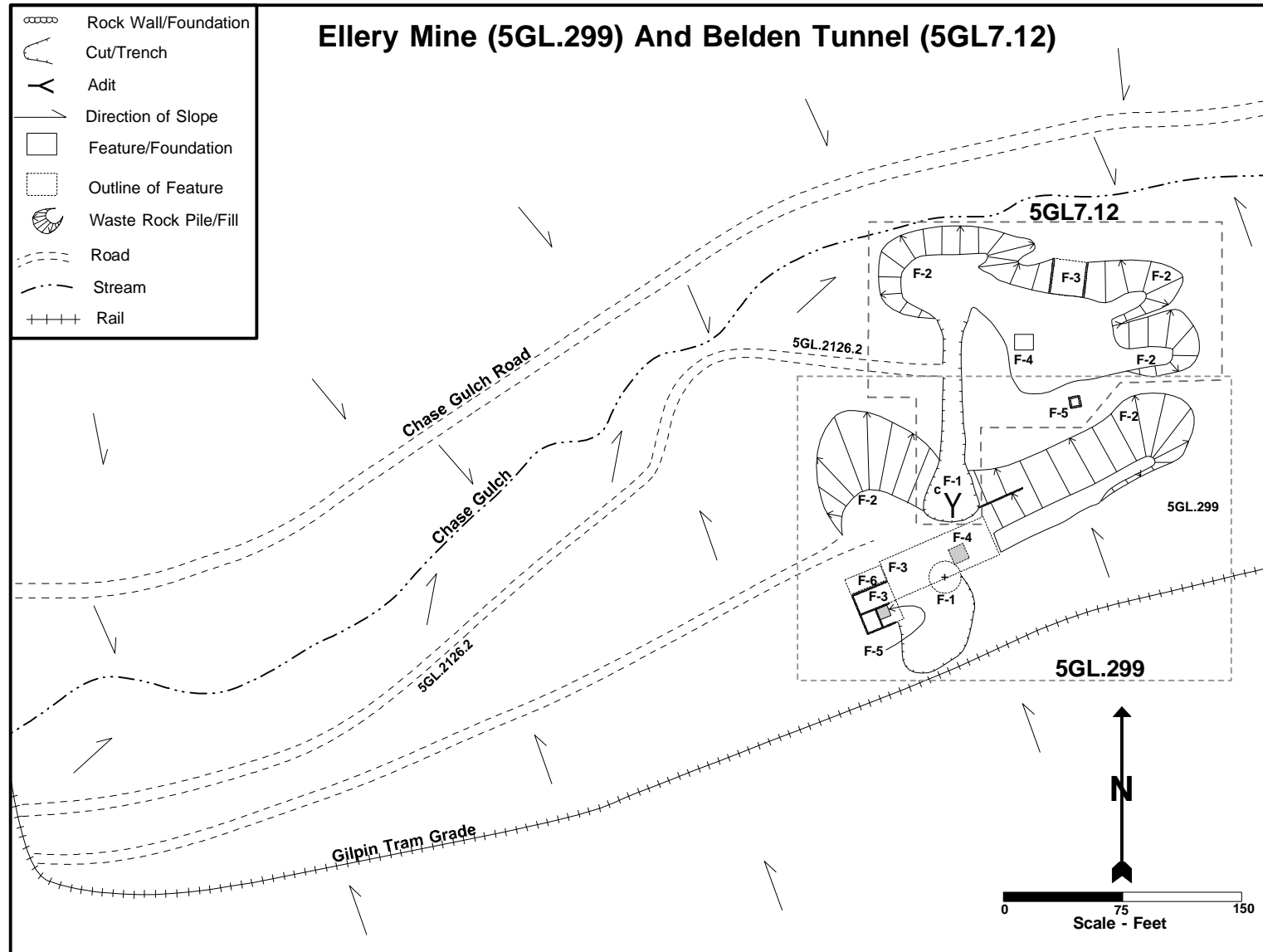


Figure 4.6: The plan view illustrates the Belden Tunnel, 5GL.7.12, Ellery Shaft, 5GL.299, roads, and Gilpin Tramway.

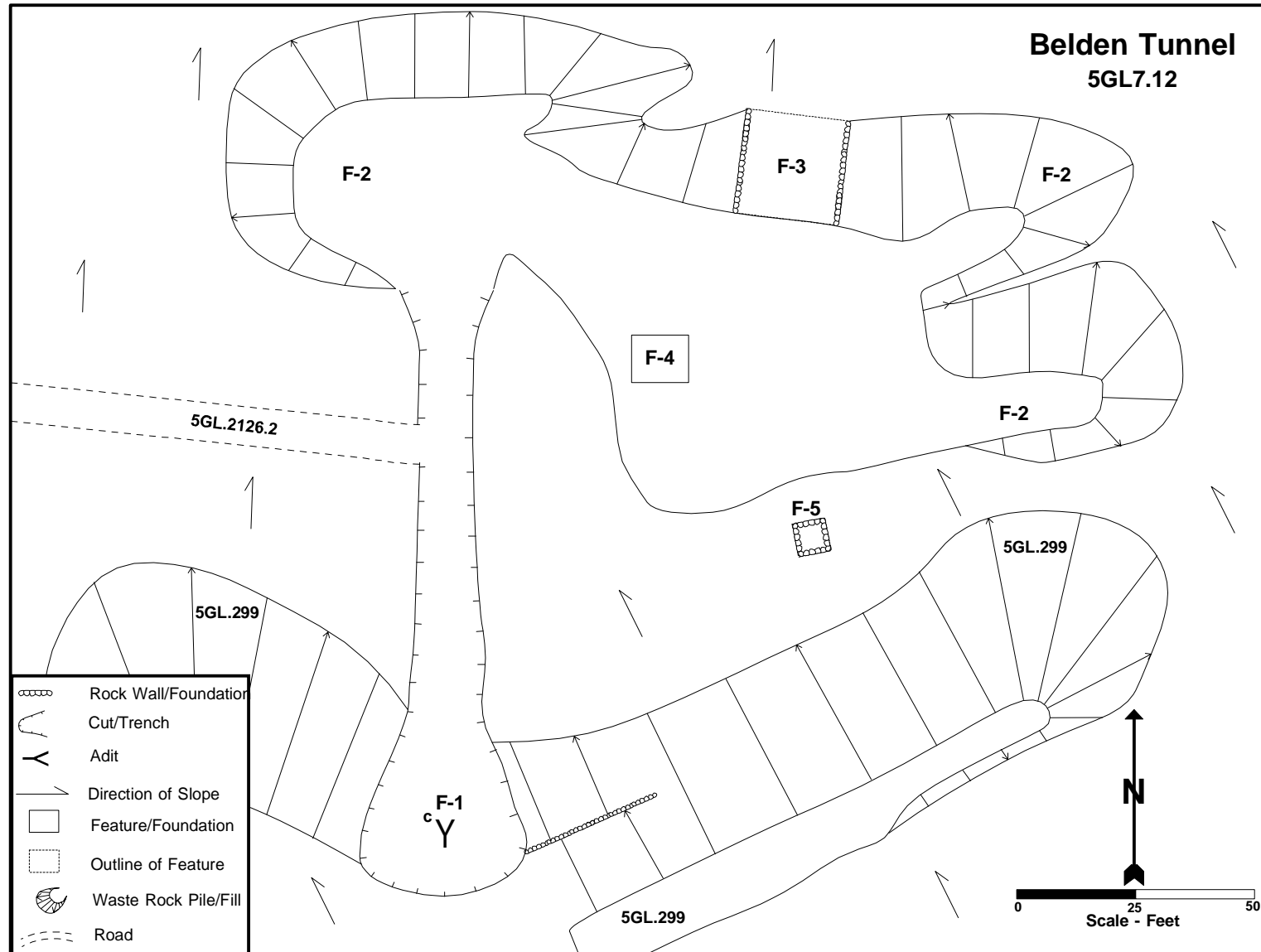


Figure 4.7: Plan view of the Belden Tunnel, 5GL.7.12.

The site offers only four intact historic features. One is the waste rock dump (F2), whose surface was scraped when the tunnel was reopened. The dump is made up of a cluster of lobes 98'x193' in area and 15' thick, each lobe representing a dead-end rail spur that was used to empty ore cars. The area's doghair sapling thicket has overtaken the dump, blanketing much of its surface.

Another historic feature is an ore bin foundation (F3) countersunk into the dump's north flank. The bin was a sloped-floor type 22'x22' in plan on a foundation of dry-laid rock walls. The walls and a depressed space in between them outline the structure's footprint.

During Belden & Tennal's peak period, the company used draft animals to pull ore cars out the tunnel. The company housed the animals in a stable on the waste rock dump's eastern portion. Presently remaining is the building's U-shaped foundation (F4) 10'x12' in area. A nearby well (F5) provided clean water all year. The well is intact, being a square chamber 4'x4' in area countersunk into the mountainside and lined with dry-laid rock walls. Thick duff conceals any artifacts that may remain.

The site's artifact assemblage is light. General structural hardware and a few boards are scattered on the dump, with a greater volume of debris including lumber and corrugated sheet iron lying around the ore bin foundation. The assemblage has surprisingly few industrial items despite the mine's mechanization and intensive activity. Only a sprinkling of blacksmith forge clinker and anthracite coal (forge fuel) extends across the dump. The assemblage was greater at one time, but most artifacts were lost to disintegration and the tunnel improvement project.

Belden Tunnel Interpretation

Only a few broad conclusions can be observed about the site's history, the recent earthmoving having destroyed critical information. Overall, evidence indicates that the tunnel was long, the underground workings extensive, and the mine a good producer. To these points, the large waste rock dump and use draft animals to pull short trains of cars are characteristic of extensive workings. The ore bin was a type and size intended for regular production, having been a generously proportioned sloped-floor variety built on a stout foundation.

Dateable artifacts are few and only generalize the mine's timeframe. Cut nails reflect activity during the 1870s and 1880s, and wire nails and corrugated sheet iron date from later years. The artifact assemblage also includes several lengths of British mine rail, strongly suggesting an 1870s timeframe when the American mine supply industry was only just rising. The rail's character-defining aspect is apparent when it is viewed in cross-section. In particular, the web of iron joining the rail's head and bottom-plate is unusually thick and indented.

Belden Tunnel Condition and Integrity

The Belden Tunnel site is in poor condition. All buildings, structures, and large objects were removed from the site long ago, leaving only archaeological features. The tunnel was reopened with heavy equipment during the 1970s or 1980s, causing heavy damage. The waste rock dump was scraped with a bulldozer and the tunnel portal cleaned out and enlarged, its rubble and debris deposited in two thick lobes along both sides. The earthmoving destroyed the site's most important area where the surface facilities were located. Only a few historic features and an impoverished artifact assemblage presently remain. The site is also becoming overgrown with thick doghair sapling forest.

The site has poor integrity due to the earthmoving. Without a complete feature assemblage or standing structures and buildings, the site lacks integrity of design, materials, and workmanship. The thick doghair forest also has eroded the site's feeling. The site does, however, have integrity of association and setting.

Belden Tunnel Significance

The Belden Tunnel is significant as an important contributing element of the historic landscape. Although overgrown with the doghair saplings, the waste rock dump and tunnel scar are large-scale historic features that contribute to the landscape's feeling of mining. Further, they complement other visually prominent resources in western Chase Gulch including the adjacent Ellery Mine (5GL.299), Belden Mill (5GL.2169), Black Quartz Mine (5GL.2202), Gilpin Tramway (5GL.2104.1), and Chase Gulch Road (5GL.2126.2).

On its own, the Belden Tunnel is recommended ineligible because integrity is insufficient. Under Criterion A, the tunnel was important for its gold production, employment, early use of rockdrills, and portal for developing a number of Winnebago Hill's veins. But, the site no longer embodies these trends. In terms of Criterion C, the Belden is not a good example of its resource type, a tunnel mine because earthmoving destroyed character-defining features. The site also will not yield important information upon further study because it lacks buried deposits, complex feature systems, or a rich surface artifact assemblage.

Belden Tunnel Management Recommendations

In terms of Section 106 compliance, the site lies on BLM land and is a contributing element of the landscape. The site's transfer out federal domain will be an adverse effect to the landscape. Mitigation may be required.

A few actions are recommended for interpretation and heritage tourism planning.

- Additional archival research to provide more information for interpretation.
- Improve site's visibility by selectively thinning doghair evergreen thicket on waste rock dump. Stumps to grade.
- Interpretive signage explaining site history, operations, and relationship to Winnebago Hill gold veins.

Belden Tunnel Heritage Tourism Potential: High

The Belden Tunnel has high potential because of its importance and prominent location on Chase Gulch floor. The site is also a candidate for being a stop on an interpretive loop trail.

Interpret Site. Interpretive signage at the site can explain the tunnel's history and function.

Interpretive Loop Trail. The mill is an important stop on a proposed interpretive loop trail. The route begins at the Dam (5GL.2168) and follows original Chase Gulch Road east along the gulch floor to the Belden Tunnel (5GL.7.12). The trail contours to Belden Mill (5GL.2169) and then curves north to present-day Chase Gulch Road. All three resources can be interpreted.

Site 5GL.295 Maryland Mine
Project: Basic Inventory

The site is a poorly preserved example of a shaft mine, the resource type. All buildings, structures, and equipment were removed long ago, and the shafts and stopes were closed with invasive methods in 1987. The resource is at the south base of Maryland Mountain, above the Bonanza Mine and Mill, and immediately above the Gilpin Tramway railroad grade. When DRMS closed the stopes in 1987, it registered the site as 5GL.295 but completed no documentation. OAHp determined the site ineligible despite lack of supporting evidence.

Maryland Mine Description

The Maryland Mine was among the earliest hardrock gold veins developed in Colorado. Shhog & Company scraped easily processed free-gold ore off the Maryland Vein in summer, 1859, and recovered the gold by washing the ore in a sluice. The mine was worked for several years during the late 1870s.

The mine was simple, consisting of three or four narrow, open stopes, a small shaft, and simple surface facilities. When developing the underground workings, miners dumped waste rock downslope from each opening by upending ore buckets. In 1987, DRMS closed the openings by bulldozing in waste rock, scraping surrounding ground and pushing over more earth, and in the case of the longest stope, installing concrete panels. The methods destroyed nearly all the site's features, leaving leveled cuts, the panels, and a distinct fan of waste rock. The fan is the only identifiable feature and, located directly above the Gilpin Tramway grade, is a contributing element of the landscape. Buried archaeological deposits are absent, and the artifact assemblage limited to a few cut nails and bits of blacksmithing refuse.

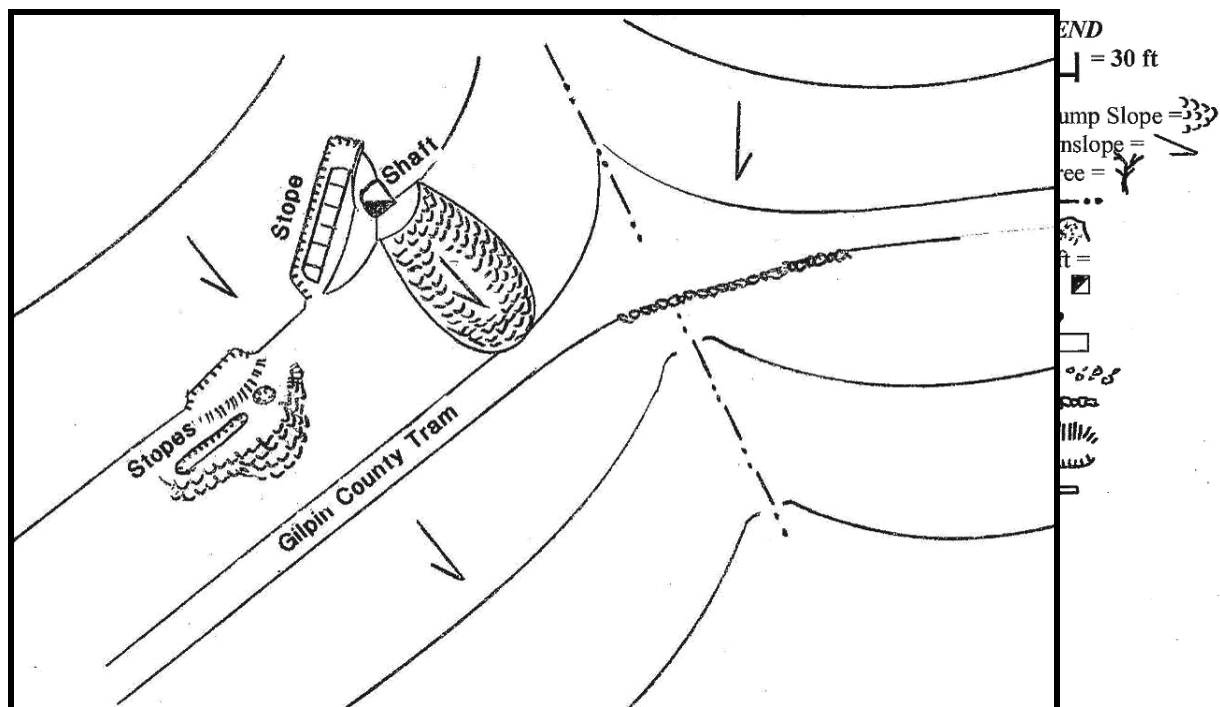


Figure 4.8: Plan view of the Maryland Mine, 5GL.295.

Maryland Mine Condition and Integrity

Invasive mine closure in 1987 erased all the site's historic attributes except for a prominent fan of waste rock directly above the Gilpin Tramway railroad grade. The original openings and any associated surface facilities are no longer apparent except for a single, long stope now capped with concrete panels. Scars left from bulldozing are becoming overgrown. The resource possesses little integrity.

Maryland Mine Significance

The resource's value is as a small-scale contributing element of Chase Gulch's historic landscape. The waste rock dump is a prominent, light-yellow fan of material adjacent to and above the railroad grade. As such, it compliments other small dumps in the immediate area.

Maryland Mine Management Recommendations

No action recommended.

Maryland Mine Heritage Tourism Potential: None

No potential.

Site 5GL.297 Allie Mine ***Project: Basic Inventory***

The Allie Mine featured two tunnels 100' apart in elevation on Chase Gulch's north side, east of Castle Rock. The tunnels were bored northeast along the Allie Vein and connected underground with the Sans Souci Mine (5GL.302) around 700' farther northeast. The Allie was developed around 1880 and last worked during the 1930s. The site is presently an archaeological example of a tunnel mine, with all buildings and structures having been removed long ago except for an ore bin. A handful of archaeological features now represents the mine's simple surface facilities. The site is both a landscape icon and potentially eligible for the NRHP in itself.

Allie Mine Description

The upper tunnel (F1) was the site's earliest, historically accessed via a wagon road continuing to the Sans Souci. When driving the tunnel, miners used ore cars on a track to dump waste rock downslope and over the road's edge, depositing a fan (F2) 20'x64' in area and 4' thick. Little more can be observed about the tunnel because DRMS plugged the portal with a grate in 1987, destroying archaeological features. The dump was, however, left alone and is a prominent element of the historic landscape.

The lower tunnel complex is better preserved. The complex was specifically sited along the Gilpin Tramway's Chase Gulch railroad line to take advantage of freight haulage. Around 1888, miners bored the tunnel (F3) north from the tram bed and used ore cars to dump waste

rock over the bed's shoulder, creating a large slope (F4) of material 93'x241' in area and 6' thick. Workers graded the top-surface flat for a blacksmith shop, ore transfer station, and the tram itself, retained by a rock wall. DRMS closed the lower tunnel with the same methods as the upper, damaging remnants of the shop and other facilities. A rock foundation (F5) 20'x20' in plan on the tram bed represents the transfer station. Ruins of an ore bin (F6) presently lie on the waste rock dump's flank, immediately above Chase Gulch Road. The bin was a sloped-floor type 10'x65' in plan erected during the 1930s by the mine's last operator. The lower dump is a prominent landscape icon, and the ore bin ruin is an important small-scale element.

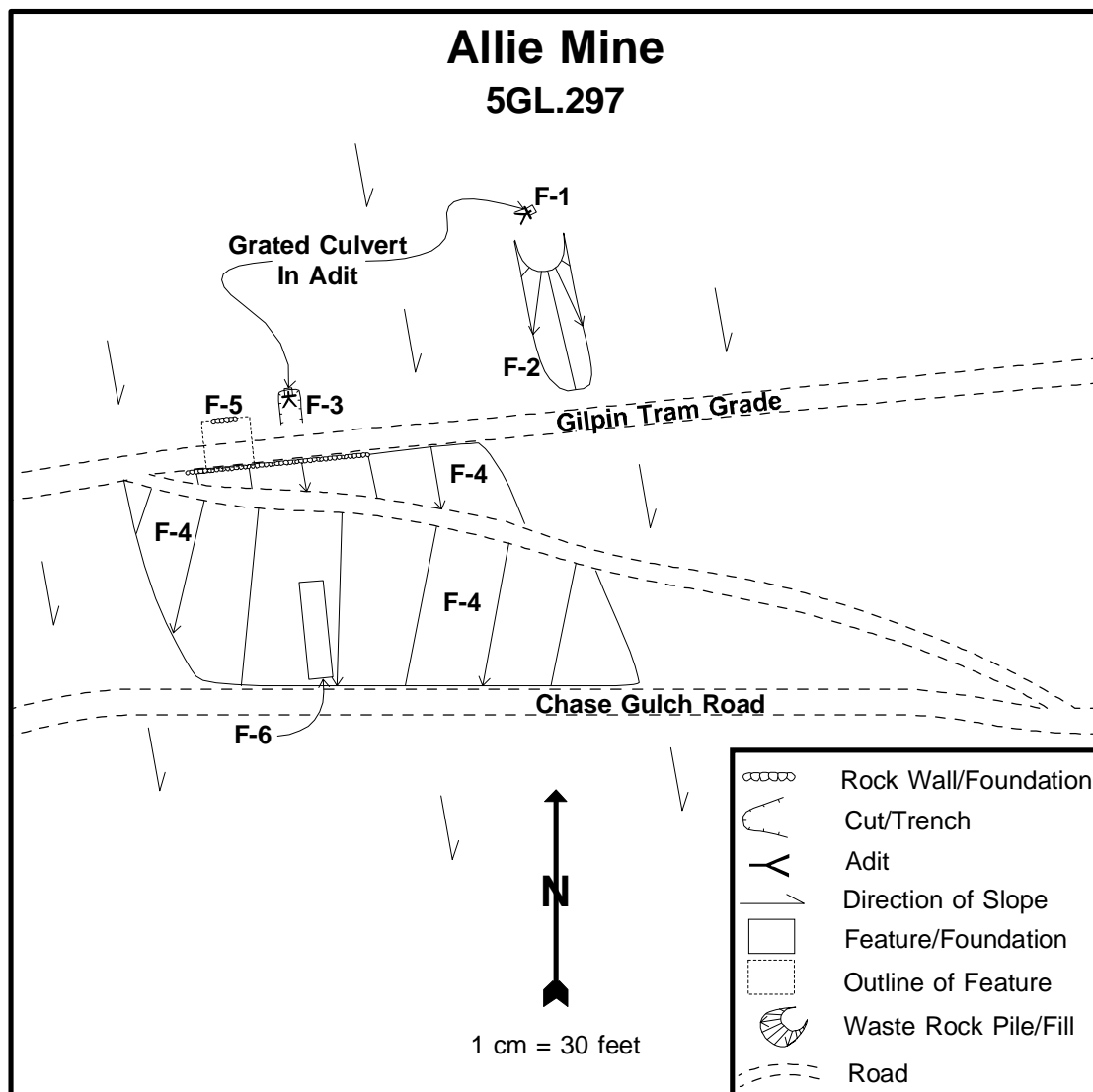


Figure 4.9: Plan view of the Allie Mine, 5GL.297.

The site possesses a sparse artifact assemblage of structural materials and industrial debris. Structural materials include lumber, cut and wire nails, and sheet iron around the lower tunnel and east along the tram bed. Industrial debris, primarily shop refuse, is concentrated mainly at the tunnel portal and transfer station foundation. Cut nails date initial facilities to the

1880s. The ore bin ruin was assembled with a high portion of salvaged materials, typical of the 1930s. Buried archaeological deposits are unlikely because activity tended not to generate material in volume, and the deposition environment with its steep slopes is not conducive.

Allie Mine Condition and Integrity

In condition, the resource is mixed. The waste rock dumps are intact, possessing original footprints, surfaces, and profiles. Archaeological features convey some of the surface facilities at the lower tunnel, where the mine's interface with the Gilpin Tramway is clear. Invasive closure methods in 1987, however, destroyed the tunnel portals and any immediately adjacent features. Revegetation is minimal, and the site is visually prominent.

As a function of condition, integrity is mixed. Archaeological features and structural debris concentrations convey overall design of the lower tunnel's surface plant, but invasive closure compromised integrity of design at the upper tunnel. The ore bin ruin has integrity of materials relative to typical Depression-era mine structures. The site also has integrity of feeling, association, and setting.

Allie Mine Significance

The Allie Mine is both an important and prominent element of Chase Gulch's landscape and potentially eligible for the NRHP and SRHP. In terms of landscape, the waste rock dumps, railroad interface, and associated rock walls are visually prominent from numerous vantage points in Chase Gulch. Further, the lower dump and ore bin ruin constitute a major landmark on the railroad grade and Chase Gulch Road.

The site may be individually eligible under NRHP and SRHP Criteria A and C in the area of Industry. The mine was a noteworthy gold producer, and is presently a good archaeological example of its resource type. DRMS registered but did not actually record the site in 1987 and recommended it ineligible, OAHF concurring despite lack of supporting information. The finding should be reversed.

Allie Mine Management Recommendations

- Intensive site documentation and archival research. Includes formal significance evaluation and reversal of current ineligibility status.
- Thin aspen saplings on Gilpin Tramway bed passing through site. Stumps to grade.
- Interpretive signage explaining site history, operations, and relationship to gold vein.

Allie Mine Heritage Tourism Potential: High

The Allie has high potential because of its importance and prominent location on Chase Gulch Road and Gilpin Tramway bed. The interface between the tram and mine, with its rock walls, large dump, and debris provides an interesting microenvironment.

Interpretive Signage. Interpretive signage on the road can explain the mine's history. More signage on the tram bed can provide greater detail of operations, interface with the tram, and the gold vein.

Site 5GL.298 Castle Rock Mine
Project: Land Disposal

Among the better archaeological sites in Chase Gulch, the Castle Rock Mine was a combination shaft and tunnel operation, the resource type. The mine was named after the iconic granite pinnacle that serves as Chase Gulch's western gateway. The pinnacle stands around 80' high at Maryland Mountain's southeast toe, and a saddle 8,590' elevation joins Castle Rock with Maryland Mountain proper. The natural environment around the pinnacle seems to have escaped the ravages of mining. An old-growth fir and spruce grove is below Castle Rock, old-growth ponderosa pines stand amid steep slopes to the east, and a young aspen forest has overtaken the saddle. The site's southern portion lies on BLM land. Historically, a marginal gold vein extended northeast along the pinnacle's base and continued up to the saddle. Miners developed the pinnacle section through a tunnel and sank a shaft over the saddle section. Good feature assemblages remain, and they qualify the site for the NRHP. The site is also a prominent landmark in the gulch's west end.

DRMS registered but did not actually record the site for a 1987 closure project, providing almost no documentation. Despite the lack of supporting information, OAHF determined the site ineligible and DRMS then closed the tunnel and shaft. The tunnel was plugged with a culvert and the shaft capped with concrete panels, but only after suffering minor bulldozing. Regardless, the site possesses sufficient integrity for a reversal of its eligibility status.

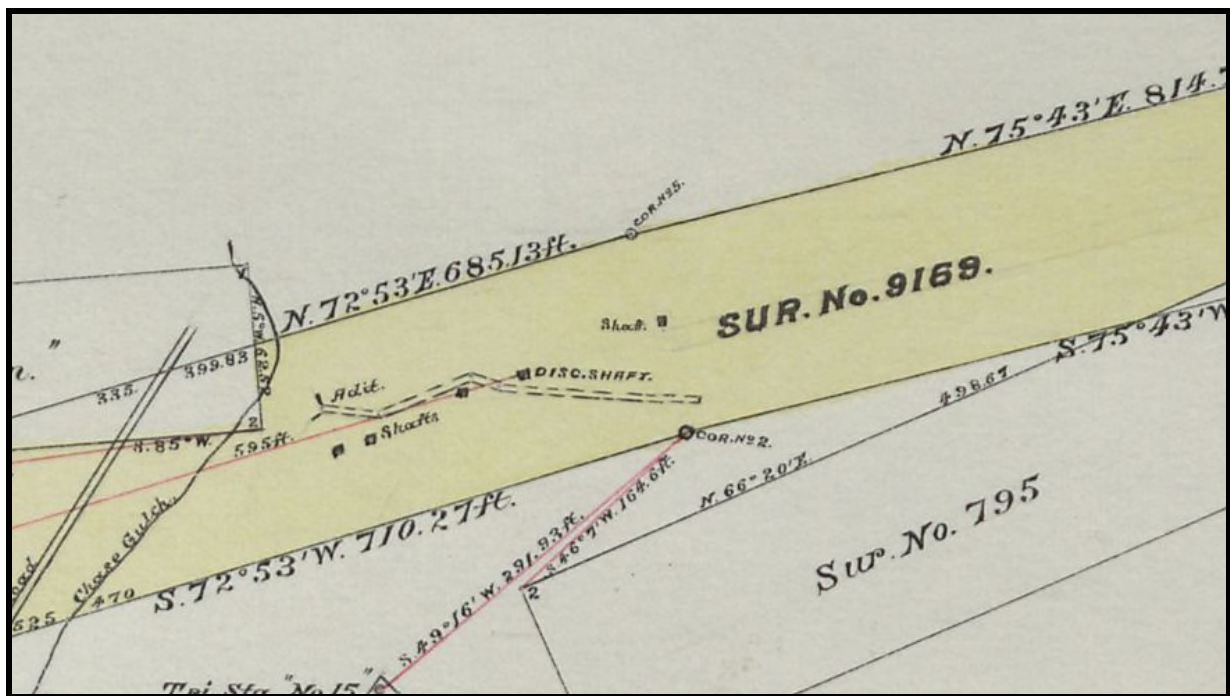


Figure 4.10: The claim plat documents the Castle Rock Mine's 1880s development workings. The Adit is present-day F13, the shafts below F15, and the Discovery Shaft F12. Although not shown, Castle Rock pinnacle stands south of the adit. Source: *Mineral Survey Claim Plat*, BLM.

Castle Rock History

The Castle Rock was developed relatively late in Chase Gulch's history, a result of the excitement over new vein discoveries in the nearby Belden Tunnel. The Belden & Tennal Mining Company had been driving the tunnel south into Winnebago Hill during the late 1870s on the presumption that hidden, or blind, veins would be encountered. They were, drawing a wave of prospectors into Chase Gulch in search of more. Newton D. Owen was among them, and he was familiar with the Gulnare Vein on the gulch's southwest side. Owen understood that the area's veins trended northeast, so he traced its direction across the gulch to Castle Rock around 1881 and unearthed an extension he named after the rock pinnacle. Shallow development through a shaft and adit revealed that the vein was not especially rich, so Owen scraped out the best ore and sold the claim. The property changed hands several times, with each new owner coming to the same conclusion as Owen. The Cook County Mining Company was the last outfit in this group to try to make the low-grade ore pay, working the adit in 1896. Denver investors purchased a majority share ten years later but did little with the property.⁶

Chicago investors Charles F. and M.J. Sauer took an interest in the claim when it came up for sale yet again in 1910. They were aware that the vein had barely been developed and almost certainly offered good ore at depth. The two family members purchased the property, organized the Castle Rock Mining & Milling Company, and began a cautious, pay-as-you-go development strategy. Rather than focus on the old adit like their predecessors, they decided to sink a new shaft and follow the vein to depth. In 1911, they hired a local manager who arranged a basic and inexpensive surface plant, to be upgraded later as the mine proved itself.⁷

The hoisting system was sinking-class in duty, intended for boring the shaft and developing the vein, and not for regular ore production. The system included a two-post gallows headframe 24' high, a steam friction hoist, and 30 horsepower upright boiler. A 24'x42' shaft house enclosed the machinery, a blacksmith shop, and change room. Dynamite was stored in a sheet iron magazine near the old adit. During 1911, a thin crew of three workers sank the shaft, 4'x8' in-the-clear, to a depth of 315' and drove levels (horizontal passages) along the vein. Rather than begin production, the Sauers spent 1912 sinking the shaft to 420' and blocking out the vein for easy extraction.⁸

Satisfied with the mine's potential, the Sauers installed a production-class surface plant in 1913 and then enjoyed a good run of output. The hoist was upgraded, the boiler replaced with an 80 horsepower return-tube unit, and a Rand duplex air compressor installed. The shaft house was enlarged to 36'x50' with a 10'x12' office added to its east side. Two ore bins were built farther east over the Gilpin Tramway railroad grade, and a steam-heated rock enclosure constructed for thawing frozen dynamite.⁹

Well-planned and professionally developed, the Castle Rock became one of Chase Gulch's leading producers for a number of years. From 1913 through 1917, a crew of seven worked the vein to exhaustion, and the mine closed permanently.¹⁰

⁶ Colorado Mine Inspection Reports: Castle Rock; *Mineral Claim Survey Plat: Castle Rock*; "Mining News" *EMJ* 3/2/05 p453.

⁷ Colorado Mine Inspection Reports: Castle Rock.

⁸ Colorado Mine Inspection Reports: Castle Rock.

⁹ Colorado Mine Inspection Report: Castle Rock; Colorado Mine Manager's Report: Castle Rock; "Mining News" *EMJ* 3/7/14 p538.

¹⁰ *Mineral Resources*, 1913:255; *Mineral Resources*, 1915:448; *Mineral Resources*, 1917:822.

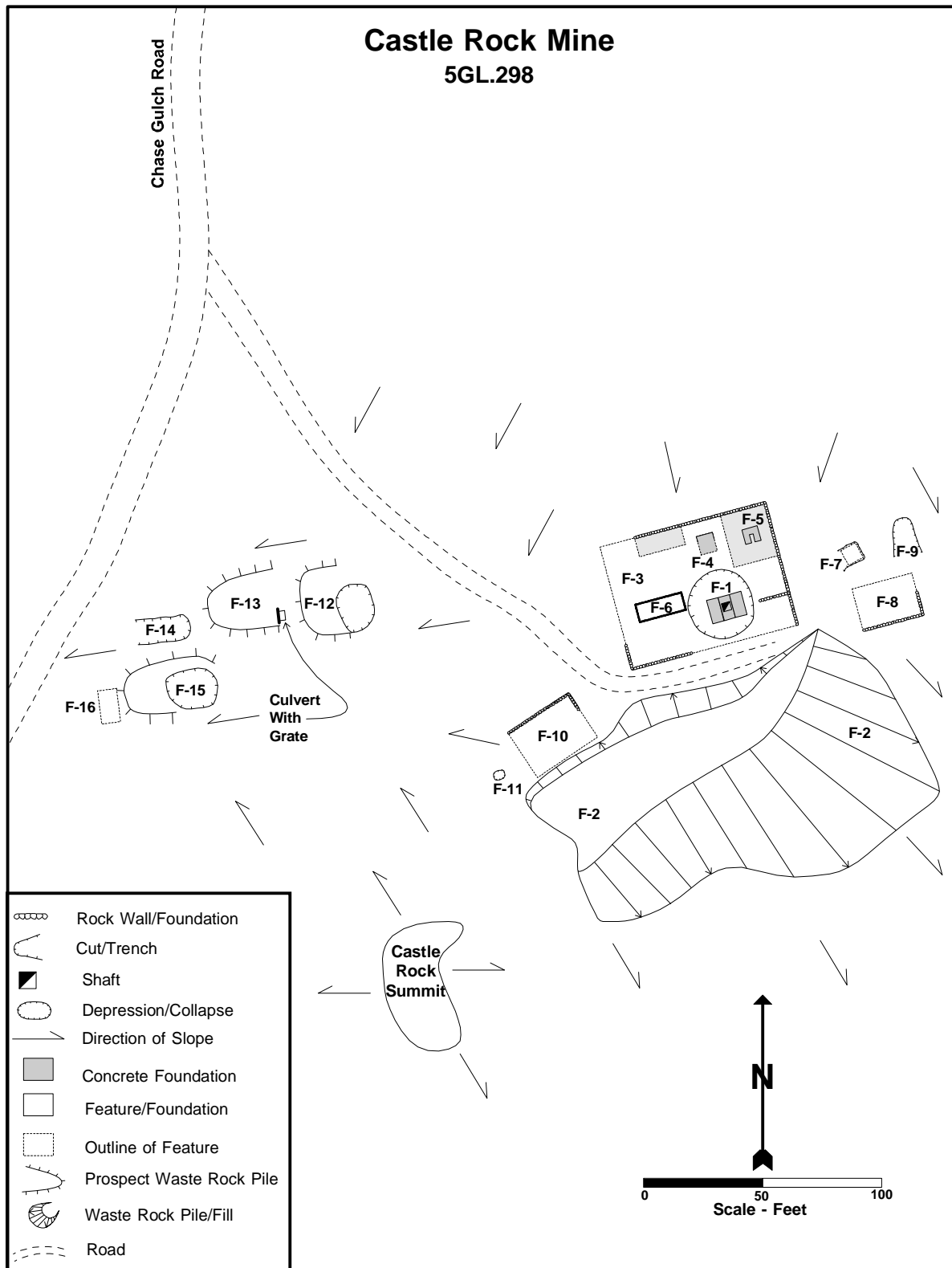


Figure 4.11: Overview map of Castle Rock Mine site, 5GL.298. Nathan Owens' 1880s workings are at left (F12-F16) and the 1911 Castle Rock company shaft (F1-F11) is at right.

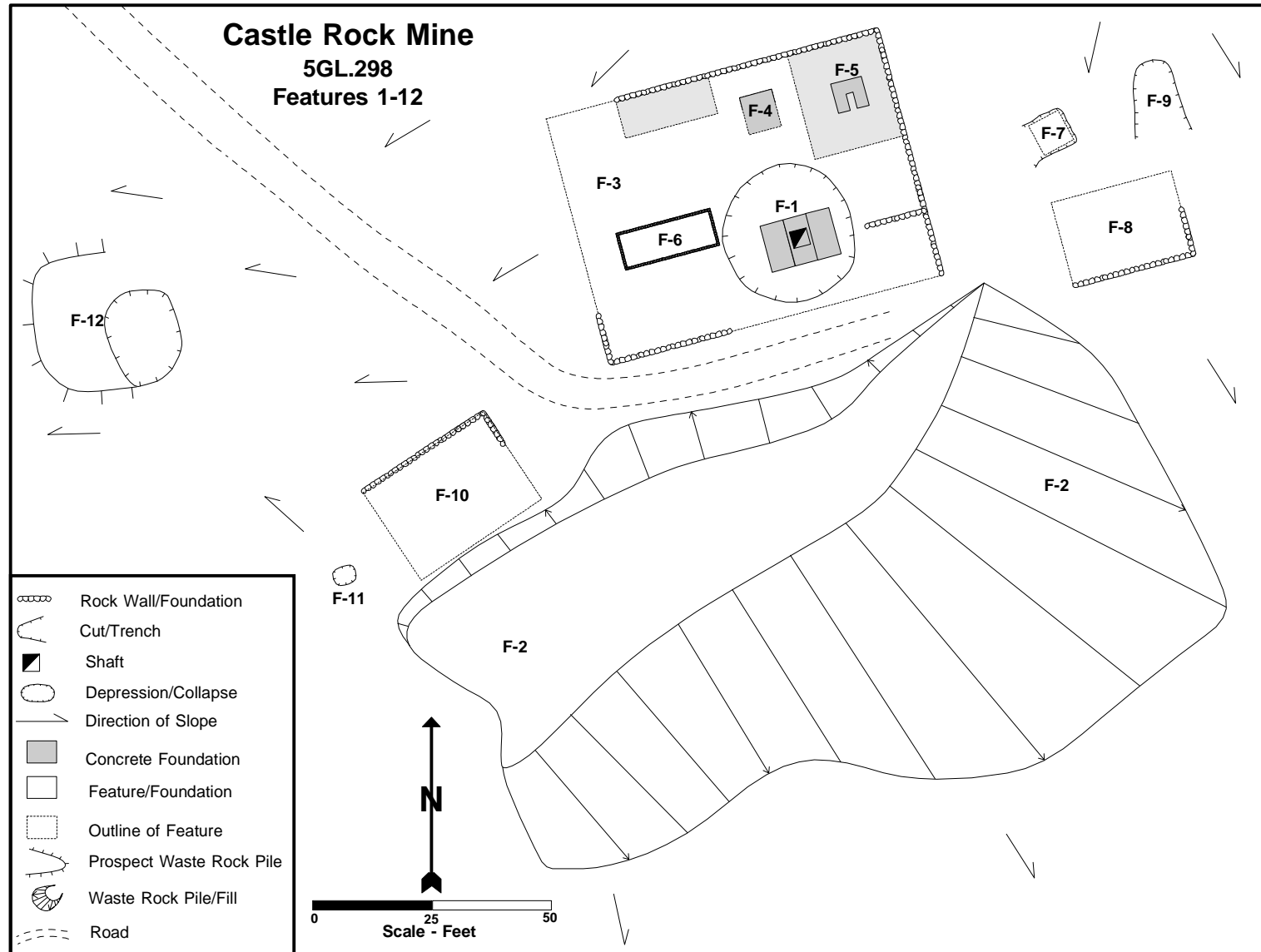


Figure 4.12: Plan view of the Castle Rock shaft complex (F1-F11).

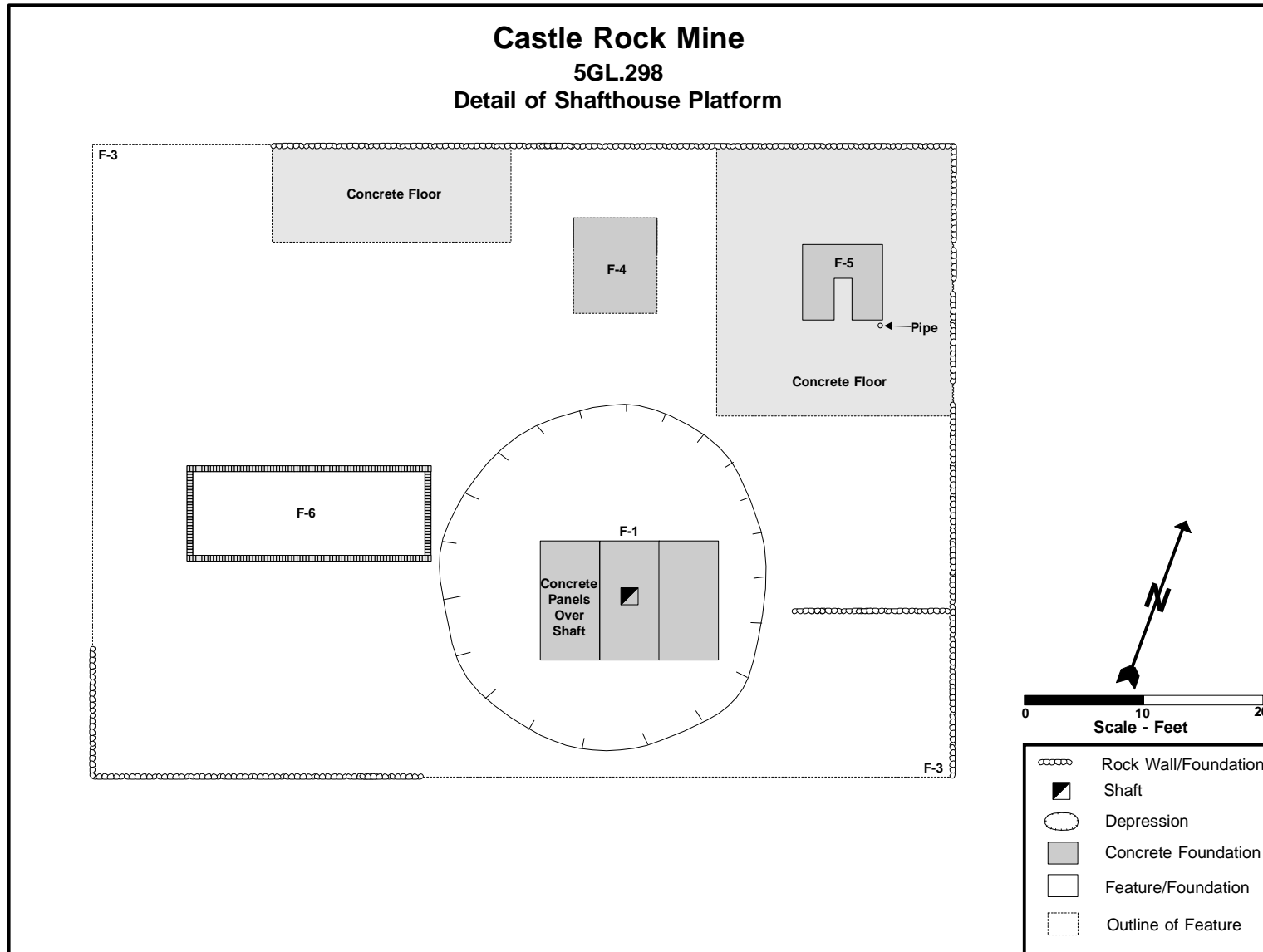


Figure 4.13: Detail plan view of the shaft house platform and machinery foundations (F3-F6).

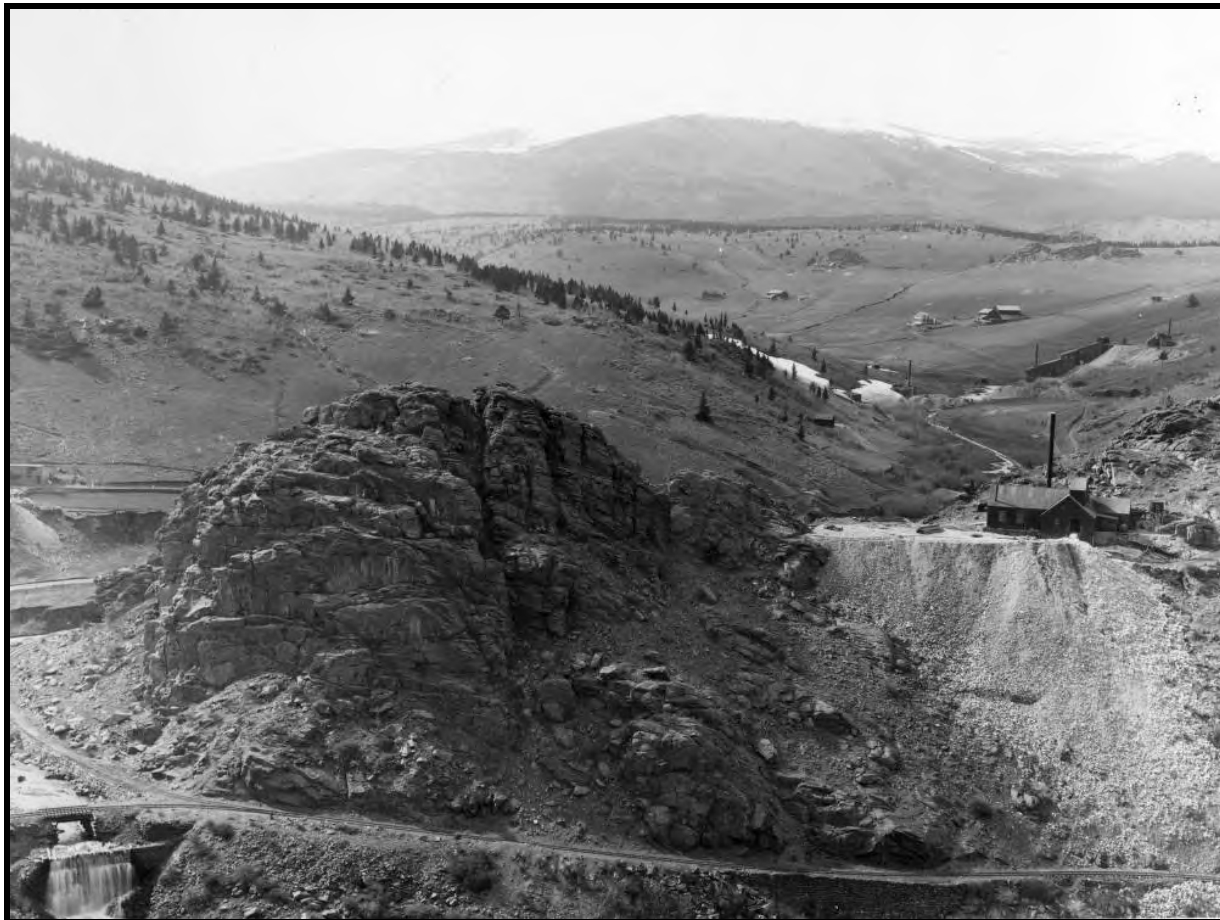


Figure 4.14: In the 1912 northwest view, the Castle Rock Mine (5GL.298) is at right and the Dam (5GL.2168) is at lower left. The Gilpin Tramway traverses the base of Castle Rock and crosses Quartz Creek at the dam. Denver Public Library L-589.

Castle Rock Description

The Castle Rock Mine features two groups of archaeological features representing Nathan Owens' early 1880s exploration and development, and the Castle Rock company's 1911 shaft. As was common, Owen first dug several probes in search of the vein, one being a trench (F14) 6' wide, 30' long, and 7' deep, and the other a pit (F16) 5'x8' in area and 2' deep. He struck the vein in a third pit and blasted a short distance downward, deepening it into a small shaft (F15). Tracing the vein northeast, Owen blasted another prospect shaft (F12) and confirmed his discovery. Both shafts have since collapsed and now manifest as subsidence craters with no original form. During the early 1880s, Owen next drove an adit (F13) along the vein and extracted a small tonnage of ore. At one time, the adit intersected F12, labeled on the claim's survey plat as the discovery shaft. The adit retains no integrity because DRMS scraped away its waste rock and installed a culvert closure in 1987. Small-scale features representing primitive surface facilities may have been destroyed at this time.

A good assemblage of features and artifacts currently remains from the shaft complex. The shaft itself (F1) is the only severely compromised feature. According to Jim Herron with DRMS, the shaft collar had collapsed and became a hazardous funnel as of 1987. At that time,

DRMS used heavy equipment to enlarge the funnel rim to 27'x29' in area and then installed concrete panels as a closure, likely destroying small-scale features. The shaft now lacks integrity.

When developing the underground workings, miners used ore cars to dump waste rock southeast from the shaft. Over time, they built up a bench of material (F2) 117'x155' in area and 12' thick, grading the top-surface flat for workspace. The dump is well-preserved and overgrown with trees at least 50 years old.

A substantial cut-and-fill platform (F3) outlines the 1913 shaft house. The building was 42'x67' in plan and oriented northeast-southwest with the vein. The platform's northwest, upslope half was cut from the hillside and retained with a dry-laid rock wall 2' to 6' high, while the southeast half was a pad of waste rock fill retained by another rock wall. The main portion around the boiler and hoist was originally floored with natural lime concrete. The platform is presently fairly well-preserved but becoming overgrown with aspen saplings and junipers. When DRMS closed the shaft, it cut away the platform's southeast edge.

Foundations remain from the 1913 production-class machinery. The hoist foundation (F4) is a concrete pad 7'x7' in plan, with anchor bolts and impressions for timber footers 6'x6' in plan (the hoist's actual size). The foundation is now partially broken and mostly buried with earth bulldozed over it by DRMS. The footprint corresponds to a single-drum steam model.

The mine's compressor was a steam-driven duplex model bolted to another professionally constructed concrete foundation (F5). The foundation is 6'4"x6'9" in plan and U-shaped, which is characteristic of the compressor type. Anchor bolts stud the perimeter, and a 5" steam pipe extends out of the east corner. The surface plant's builder, Stroehle Machinery & Supply Company of Black Hawk, used a stamp to impress the firm's name in the west edge.

Coinciding with archival information, an 80 horsepower return-tube boiler ran the mine's hoist and air compressor. The boiler shell was in a brick setting (F6) 10'x20' in plan and 7' high, well-built of common bricks mortared with natural lime grout on a foundation of rocks. The setting's corners were rounded. The boiler shell was removed, leaving the southeast wall and interior pads intact, surrounded by rubble.

The dynamite thawing structure (F7) remains partially standing northeast of the shaft. Workers converted a niche in granite outcrops by adding dry-laid rock walls around the east and west sides, and a sheet iron roof over the top. The niche was originally 6'x7' in area and 5' deep opening south, with a 30" wide gap in the south side as a doorway. At some point after the mine was abandoned the walls partially collapsed and the roof blew away, filling the interior with soil and leaving the stringers. No evidence of a thawing chamber or the steam heat noted in archival sources remains.

A platform (F8) marks the ore bin built east of the shaft. The platform is 18'x26' in area, irregular in surface, and slopes to the southwest. A dry-laid rock wall 4' high retains the fill-bank. Nothing is left of the bin itself.

The saddle between Maryland Mountain and Castle Rock proper was apparently used as a storage yard. Workers erected a dry-laid rock wall 30' long and 4' high along the northwest shoulder and backfilled the space behind it with soil scraped off the saddle. They created a flat storage yard 24'x38' in area, which apparently had no buildings or structures. The yard is becoming overgrown with aspen and limber pine saplings.

The artifact assemblage is among the more complete in Chase Gulch. Structural debris is disbursed around the shaft house platform, thawing structure, and ore bin platform. Bricks and masonry hardware are incorporated into the boiler setting ruin. Industrial refuse is concentrated around the shaft house platform where the machinery and shop were located. An air hose reflects

the use of rockdrills, while various pipe segments remain from the steam and compressed air systems. Forge clinker and hardware represent shop work.

Buried archaeological deposits are absent. Privy pits could not be identified, and the surrounding slopes are too steep for accumulation of materials.

Castle Rock Interpretation

The Castle Rock Mine was a professionally engineered operation, guided by an expert, and funded by experienced investors. The Sauers, Chicago capitalists, apparently understood the vagaries of mining and took a prudent approach with the Castle Rock. Rather than pour money into costly development and facilities at the start, like inexperienced investors, the Sauers cautiously and incrementally developed the vein. They funded a simple surface plant in support of deep exploration at first, replacing it with production-class machinery only when sufficient ore reserves had been confirmed.

The engineer who designed the production-class plant for the Sauers remains unknown, but he likely worked for the plant's builder, the Stroehle Machinery & Supply Company based in Black Hawk. The business grew from George Stroehle's 1870s boiler repair shop and became one of the principal mine construction firms in Gilpin County. The company often gang-stamped its name into concrete machine foundations, exemplified by a Stroehle impression in the Meeker-Success Mine's compressor footing, Lake Gulch (F6, 5GL.343).

Overall, the surface plant had many basic characteristics of professional engineering and production-class design. In a broad sense, the plant was well-laid out and generously spaced. Its machinery met production-class specifications, the hoist being 6'x6' in plan, the boiler a return-tube unit, and the compressor an efficient duplex model. The plant also had facilities above and beyond like-sized mines including the dynamite thawing structure, office, and storage yard. Such a plant, including the large ore bin platform, reflects sustained production from depth.

Dateable artifacts are general to the early 1900s and 1910s. Combined, natural lime cement, wire nails, corrugated sheet iron, a rubberized fiber air hose, and amethyst and aqua glass reflect this timeframe. A handful of cut nails are scattered around, but these probably fell out of lumber salvaged from elsewhere that was later reused on-site.

Castle Rock Condition and Integrity

The Castle Rock Mine site possesses good integrity on an archaeological level. All machinery, buildings, and structures were removed decades ago, leaving an intact assemblage of archaeological features. DRMS caused some disruption in 1987 when it closed the 1911 shaft (F1) and 1880s adit (F13). The shaft was enlarged with heavy equipment and then capped with concrete panels, while the adit was plugged with a steel culvert and its waste rock dump scraped away. The adit and shaft lack historic attributes but the rest of the site is fairly well preserved. Erosion has washed the ore bin platform and cut runnels in the dump's flank, and a young aspen grove is overtaking the surface plant area.

The site possesses sound integrity on an archaeological level. A fairly well-preserved set of archaeological features conveys design of the surface plant described in archival sources. The features and artifacts have integrity of association, and the site in its Castle Rock setting has a strong feeling of mining.

Castle Rock Significance

The Castle Rock Mine is important in two ways. First, the site is a landmark in western Chase Gulch, visible from numerous vantage points. Together, the mine and granite pinnacle create a visual impression and feeling characteristic of Gilpin County mining.

Second, the site is recommended individually eligible. In terms of Criterion A, the site was locally important for its regular gold production during the Central City Mining District's last years of significance. The Castle Rock yielded good ore continuously from 1913 through 1917, a time when the mining district was in decline. The Castle Rock and other mines like it helped soften the industry's decline through their sustained production and employment. Businesses like the Stroehle Machinery & Supply Company were able to survive longer than otherwise.

Regarding Criterion C, the site is both a good archaeological example of its resource type, a shaft mine, and is the work of a master builder. The archaeological features clearly convey the surface plant's overall design, which conforms to the pattern characteristic of professionally engineered, mechanized shaft mines. The hoist, compressor, and boiler foundations also provide details regarding the pieces of machinery favored for small, production-class plants. According to the Stroehle gang-stamp impressed in the compressor foundation's concrete, the Stroehle Machinery & Supply Company was the surface plant's builder. The Stroehle Company was vital to Gilpin County, servicing equipment and selling new mining machinery and supplies at its Black Hawk yard. As important, the company also was the principal mine construction contractor, erecting surface plants and mills throughout the area. The Castle Rock Mine is a good archaeological example of the firm's work.

Castle Rock Management Recommendations

In terms of Section 106 compliance, the site's southern edge and northwestern tip extend onto BLM land. The site is also a prominent element of the landscape and recommended individually eligible. Transfer of the BLM land out federal domain will be an adverse effect to both the landscape and an eligible site. Mitigation may be required.

Several actions are suggested for the site's preservation, interpretation, and heritage tourism development.

- Intensive site documentation and archival research on the Stroehle Company.
- Thin aspen saplings throughout site. Stumps to grade.
- Interpretive signage explaining site history, operations, and engineering. Information on the Stroehle Company.
- Install wooden bench or picnic table on open ground between site and Castle Rock pinnacle. Avoid the site itself.

Castle Rock Heritage Tourism Potential: High

The site has high potential because of its importance and prominent location at Castle Rock pinnacle.

Interpretive Signage. Interpretive signage can explain the history of the mine and its builder, the Stroehle Company.

Overlook Trail. Designate the existing mine road as an access trail up to Castle Rock saddle. The road is ready for use.

Overlook. Castle Rock saddle is an excellent overlook providing unique views of Chase Gulch and the Great Divide to the northwest. The saddle is a natural location for signage and a bench. Minimize modern improvement.

Site 5GL.299 Ellery Mine
Project: Land Disposal

The Ellery is an archaeological example of a shaft mine, the resource type. The site is on Winnebago Hill's northwest flank immediately above the Belden Tunnel (5GL.7.12). The two

Resource Type: Shaft Mine

A shaft mine was a productive operation based around a vertical or inclined opening. Shafts always required a hoisting system involving a mechanical hoist, hoisting vehicle such as an ore bucket, and headframe to guide the hoist cable down the shaft. In the Central City district, a shaft house usually enclosed the hoisting system and a blacksmith shop.

sites are connected both physically and historically. The Ellery's substantial waste rock dump cascades down into the Belden complex (see Figure 4.6 for an overview map). The underground workings were linked, as well. The surrounding slope is very steep, northwest-facing, and studded with boulders and bedrock outcrops. The area is also overgrown with young doghair fir and pine forest that makes photography difficult. Elevation is 8,700'. The Gilpin Tramway railroad grade (5GL.2104.1) passes immediately above the site, and wagons historically accessed the shaft on a wagon road contouring west. The site's northwestern corner is on BLM land.

The shaft suffered catastrophic collapse that compromised the site's integrity, but the site is still a contributing element of the landscape. DRMS closed the shaft in 1987, which was at that time a massive funnel. Abandoned vehicles were pushed in and buried with waste rock bulldozed from the waste rock dump. DRMS registered but did not actually record the site, and despite the lack of supporting information, OAHF determined the site ineligible.

Ellery Mine History

The Ellery Mine was a byproduct of a rich vein discovery in the nearby Belden Tunnel. David D. Belden and his Belden & Tennal Mining Company began boring the tunnel in 1875 to develop a number of gold veins he owned on Winnebago Hill. He convinced friends to provide money for the project, promising them that the tunnel would not only undercut his veins, but also encounter blind, or previously unknown, ore bodies. Belden was correct. His miners intersected what he named the Ellery Vein after a mere 120' of progress underground. The vein appeared to be rich, so the company staked it as the George W. Ellery claim in 1875.¹¹

¹¹ *Rocky Mountain News* 8/26/76 p2 c3.

Without hesitation, the company drove a drift (horizontal development passage) southwest along the vein and began extracting ore. Further exploration confirmed that the vein was extensive, and it became the company's principal source of income for several years, ultimately yielding \$33,000. To better develop it, miners sank the Ellery Shaft, no more than a constricted passage ending in the drift immediately west of the tunnel. Miners lost the gold-bearing zone in 1877, and the company then leased the claim out to independent miners. They found the zone again and extracted its rich ore for several more years. All work had been done through the Belden Tunnel, with no exploration below its level. The Ellery was among the first veins thought to be exhausted, and the company suspended operations around 1885 when it determined the other veins had been gutted as well. The Ellery Shaft remained unimproved.¹²



Figure 4.15: The circa 1900 photo is an east view down Chase Gulch. Castle Rock stands at left, and the Gilpin Tramway crosses the Dam (5GL.2168) at lower right. The Ellery Mine (5GL.299) is behind. Denver Public Library Z-6877.

¹² *Rocky Mountain News* 1/14/77 p4 c6.

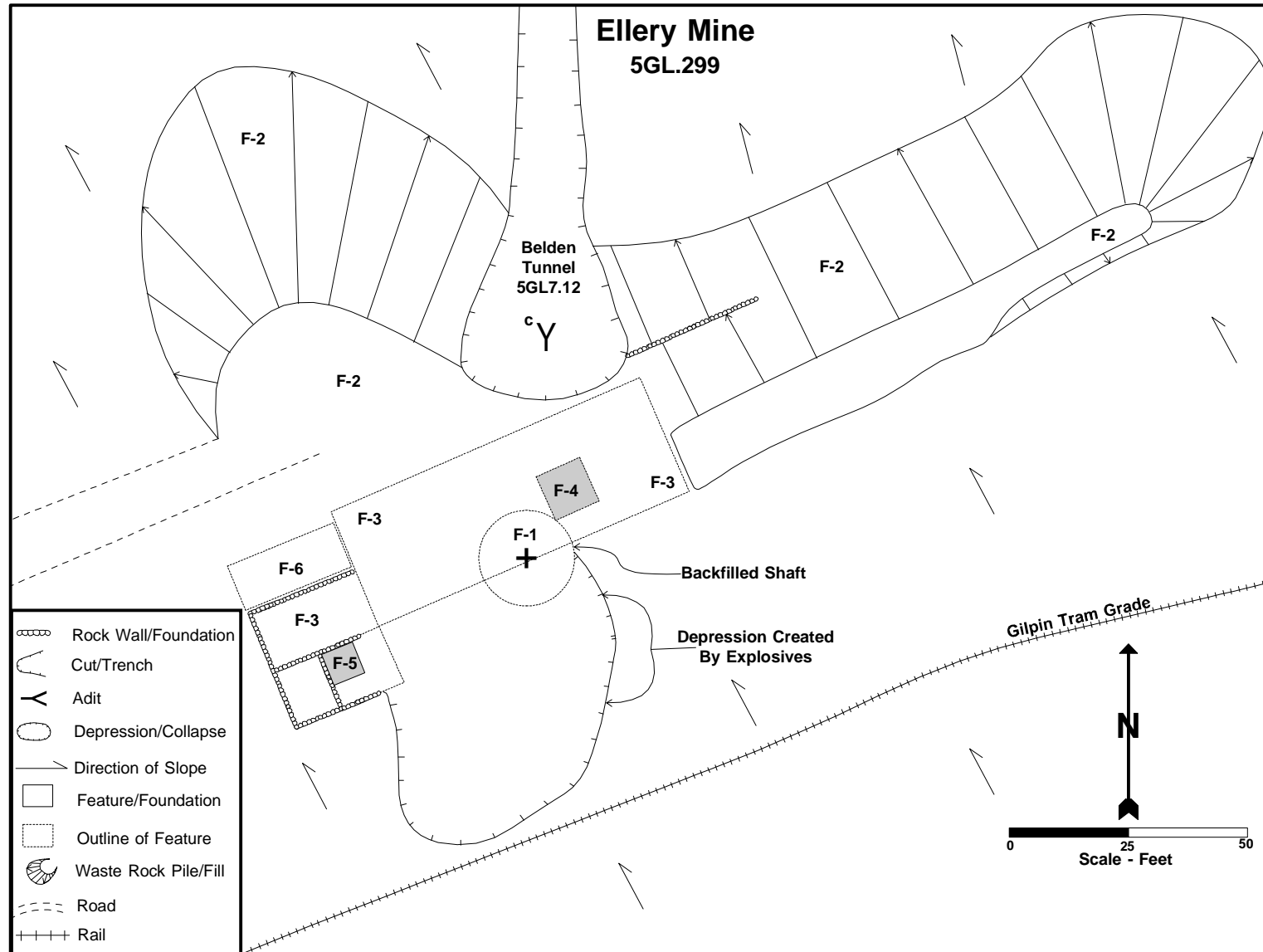


Figure 4.16: Plan view of the Ellery Mine, 5GL.299.

Around 1901, a party of Denver mining experts determined that the Ellery Vein had never been explored at depth and probably offered ore below the tunnel level. They interested Eastern capitalists in the idea and leased the Ellery claim. In 1901, William Couch began managing a costly development project involving a new surface plant over the old shaft and an intensive sinking campaign. The shaft reached 615' later in 1902, but the vein was not as rich as hoped. Regardless, the Ellery produced low-grade ore for several years, and then intermittently into 1909. Costs exceeded income, however, and the outfit suspended operations.¹³

Ellery Mine Description

The Ellery Mine is a simple resource whose feature assemblage is difficult to interpret due to massive shaft collapse. In 1987, the shaft was a ragged funnel at least 40' in diameter, with additional subsidence upslope and south. DRMS pushed in abandoned vehicles and capped them with a substantial amount of waste rock bulldozed from the waste rock dump. During collapse, the shaft drew in most of the site's shaft house platform, associated small-scale features, and surrounding ground. Today, the shaft (F1) is a rubble plug around 35' in diameter surrounded by a hummocky jumble of boulders and junk discarded by local residents.

The waste rock dump (F2) manifests as a main pad 94'x110' in area and 20' thick, with a bench 85'x132' in area extending east. The total formation of pad and bench is 110' wide, 206' long, and 20' thick.

Historically, a frame shaft house 28'x95' in plan enclosed the shaft collar, hoisting and compressed air systems, and shop. The building stood on a platform (F3) oriented northeast-southwest cut from the surrounding slope. Workers erected a dry-laid rock wall around 8' high to retain the cut-bank. The platform is now in poor condition, with only its southwest and northeast ends identifiable. Shaft collapse drew in the entire center portion and all small-scale features at one time there. The platform's southwest end is 28' wide and 24' long and divided into two levels retained by rock walls. One level is 11'x12' in plan and featured the mine's hoist (F4). The second level is 3' lower, 11'x24' in area, and featured the mine's boilers. Duff and wall-fall now blanket the levels, concealing artifacts. The platform's northeast end featured the mine's air compressor (F5) and is now a confusion of waste rock and boulders 18'x28' in area.

The hoist was a single-drum steam unit 7'x7' in plan. The machine was anchored to six bolts incorporated into a dry-laid rock pad (F4). Wall-fall and duff cover the foundation. The compressor was a steam-driven straight-line model 10' long. A foundation of twisted anchor bolts (F5) presently remains, the bolts having been damaged when DRMS closed the shaft. Archaeological features representing the mine's shop, headframe, boilers, and ore bin are absent.

The site offers a sparse and simple artifact assemblage mixed with modern refuse. Structural debris such as nails, bricks, sheet iron, and a few lumber pieces are distributed around the shaft house platform's perimeter. Boiler clinker and shop refuse is concentrated along the platform's northwestern edge, a boiler smokestack section lies to the west, and a 2" compressor air pipe is exposed in the shaft subsidence area. Buried archaeological deposits are absent.

Ellery Mine Interpretation

The damaged feature assemblage is capable of supporting only a few broad observations about the Ellery. Material evidence suggests that the Belden & Tennal Company installed at least

¹³ *Mineral Resources*, 1908:383; "Mining News" *EMJ* 11/15/02 p660; "Mining News" *EMJ* 12/10/03 p905.

some surface facilities during the 1880s, prior to the substantial 1902 development campaign. Particularly, almost half the site's nails are cut varieties, which pre-date 1890. The other half are wire, left from the 1902 surface plant. The rest of the site's artifacts are difficult to date.

Overall, the Ellery was a typical well-funded, professionally designed operation with a production-class surface plant. The hoist was a 7'x7' single-drum steam unit, a smaller production-class model intended for work in at depth. The compressor met specifications, and the boilers probably did as well although their type cannot be interpreted. The shaft house was a generous size, accommodating the hoisting, compressed air, and steam systems, and a blacksmith shop, with room to spare. The building also stood on a solid rock foundation. The large waste rock dump confirms that the Ellery shaft was at least 615' deep with drifts driven along the vein. It appears that the mine was not, however, a voluminous producer, as the site lacks evidence of ore bins.

Ellery Mine Condition and Integrity

As a historic resource, the Ellery is in poor condition because of catastrophic shaft collapse and subsequent mine closure. The shaft gave way decades ago and became a broad funnel, while ground to the southwest also subsided, creating a broken, blocky crater in the mountainside. The collapse wrecked most of the shaft house platform and associated small-scale features. In 1987, DRMS filled the funnel with abandoned vehicles and waste rock bulldozed off the dump. The subsidence and closure severely affected the site's feature and artifact assemblages. The shaft house platform is now difficult to discern, and many surface plant components are no longer represented. Presently, the waste rock dump and shaft house remnants are becoming overgrown.

The site retains poor integrity. Without an intact feature assemblage, buildings, or structures, the site lacks integrity of design, materials, and workmanship. The heavy disturbance also eroded the site's association and feeling, but the site is in an excellent setting.

Ellery Mine Significance

The Ellery Mine is significant as an important contributing element of the historic landscape. The waste rock dump and shaft scar are large-scale historic features that contribute to the landscape's feeling of mining. Further, they complement other visually prominent resources in western Chase Gulch including the adjacent Belden Tunnel (5GL.7.12), Belden Mill (5GL.2169), Black Quartz Mine (5GL.2202), Gilpin Tramway (5GL.2104.1), and Chase Gulch Road (5GL.2126.2).

Individually, the Ellery Mine is recommended ineligible because integrity is insufficient. In terms of Criterion A, the shaft was important for its gold production and employment 1901-1904. But, the site no longer possesses attributes associated with these trends. Under Criterion C, the site is not a good example of its resource type, a shaft mine because shaft collapse heavily damaged the feature assemblage. The site also will not yield important information upon further study because it lacks buried deposits, complex feature systems, or a rich surface artifact assemblage.

Ellery Mine Management Recommendations

In terms of Section 106 compliance, the site is a contributing element of the landscape, and its northwest corner lies on BLM land. The site's transfer out federal domain will be an adverse effect to the landscape. Mitigation may be required.

A few voluntary actions are recommended for interpretation and heritage tourism planning.

- Additional archival research to provide more information for interpretation.
- Improve site's visibility by selectively thinning doghair evergreen thicket on waste rock dump. Stumps to grade.
- Interpretive signage explaining site history, operations, and relationship to Belden Tunnel.

Ellery Mine Heritage Tourism Potential: High

The Ellery Mine has high potential because of its importance and prominent location immediately below the Gilpin Tramway railroad grade.

Interpret Site. Interpretive signage at the site can explain the shaft's history and relationship to the Belden Tunnel.

Site 5GL.300 First Centennial Shaft ***Project: Basic Inventory***

The First Centennial Vein was discovered in 1875 and initially developed through a shaft by the same name. The vein trended northeast through Winnebago Hill, and the shaft was sunk on the hill's north flank. The shaft remained primitive and yielded ore in limited tonnages until 1880. At that time, local investors bored the Centennial Tunnel (5GL.2206) from Chase Gulch, intersecting the shaft at depth. The shaft was then abandoned in favor of the tunnel. Presently, the First Centennial site is a good archaeological example of its resource type, an early shaft mine.

Long after abandonment, the shaft collar imploded and became an open funnel. DRMS closed the funnel with a plug in 1987 and registered the site as 5GL.300 under the mistaken name of Ellery. The site was not clearly documented and incorrectly recommended ineligible. OAHF concurred despite the lack of supporting information. The finding should be reversed. The closure maintained site integrity by avoiding important features. The site is both a contributing element of the landscape and potentially eligible for the NRHP and SRHP.

First Centennial Description

When intact and operating, the mine included the shaft, a frame blacksmith shop to the west, and a horse whim hoisting system to the east. The hoisting system consisted of a horizontal reel whim countersunk into a circular pit, and a headframe over the shaft. A good assemblage of archaeological features remains from the operation.

Miners sank the shaft (F1) directly on the First Centennial Vein, timbering the collar to retain the sides. The timbering rotted and imploded decades ago, and DRMS capped the opening with a polyurethane foam plug in 1987. The shaft is now a subsidence crater 24'x30' in area without original form.

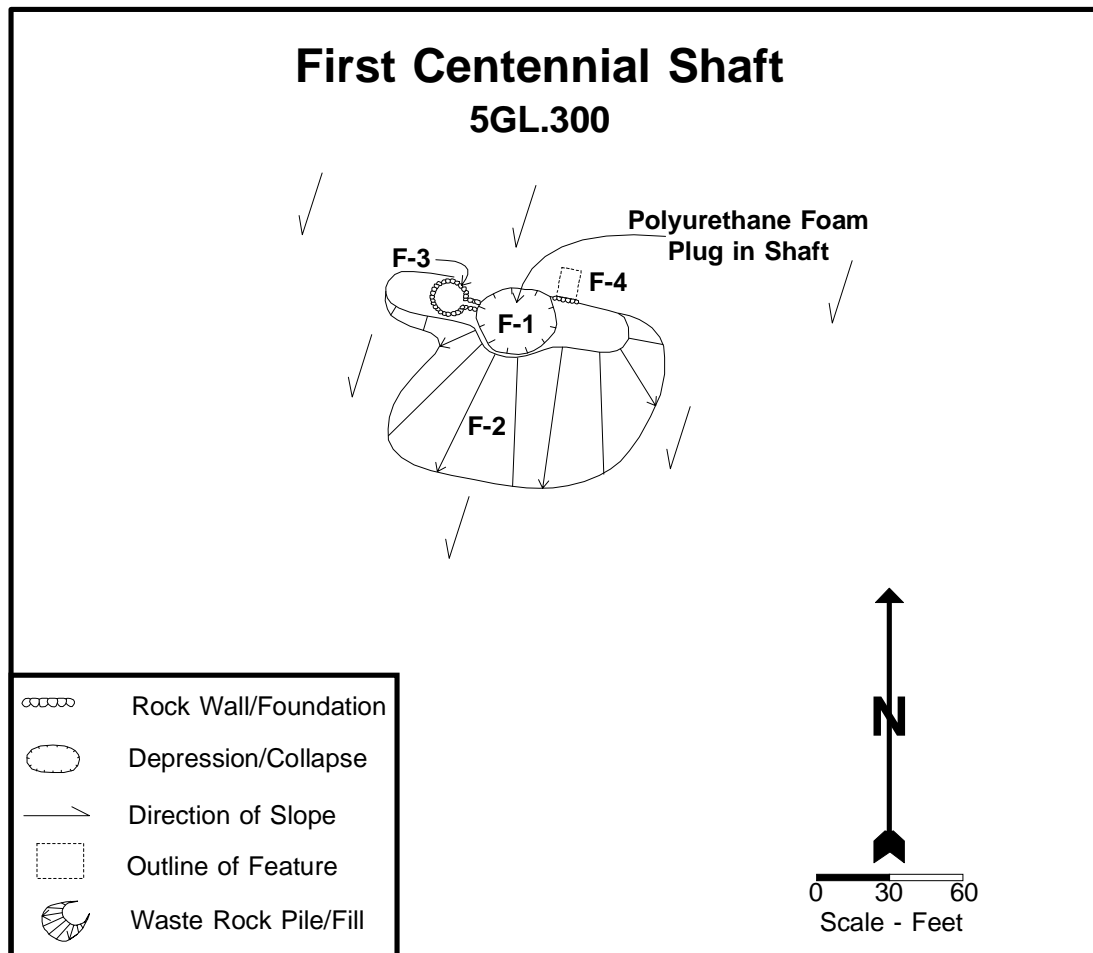


Figure 4.17: Plan view of the First Centennial Shaft, 5GL.300.

As miners developed the underground workings, they dumped waste rock around the shaft by upending an ore bucket. In so doing, they built up a bench (F2) of material 91'x107' and 8' thick, grading the top-surface flat for workspace. Most of the dump is preserved, though the center has slumped into shaft.

The whim was stationed east of the shaft. The apparatus featured a horizontal cable reel rotating on an axle anchored to the bottom of a circular pit (F3) countersunk into the ground. Recessing the reel allowed a draft animal, tethered to a harness beam, to walk an encircling track and wind the cable. The reel is gone but the pit is well-preserved, being 12' in diameter and 3' deep lined with well-built dry-laid rock walls. Duff blankets the interior, concealing buried features such as the reel's anchor.

The shop stood on a platform (F4) east of the shaft. Also well-preserved, the platform is 12'x12' in area, graded with cut-and-fill methods, and retained by a dry-laid rock wall. Remnants

of a gravel-filled rock forge are in the southeast corner.

The site possesses a sparse artifact assemblage because the operation generated little waste, and those items remaining either disintegrated or were buried with duff and soil creep. Artifacts include cut nails, sheet iron, a few decayed pieces of lumber, blasting powder kegs, forge clinker, and crude hole-in-cap cans distributed on the waste rock dump. Overall, cut nails, the kegs, and the use of a horizontal reel whim suggests that the shaft dates to the 1870s. Wire nails in lumber remain from a waste rock sorting operation sometime after 1890.

Buried archaeological features are likely to be found in the whim pit and shop platform. In particular, the whim pit probably contains buried foundation elements that could contribute to an understanding of early horse whim engineering. The shop platform may offer buried artifacts and possibly small-scale features reflecting early mine blacksmithing and the design of shops.

First Centennial Condition and Integrity

Given the resource's early timeframe and simplicity, it is fairly well preserved overall, its individual features fully conveying the surface facilities. The shaft is the only compromised feature, having collapsed long ago. The dump retains its original shape, profile, and surfaces, although the central area has slumped into the shaft. The whim pit is the site's most important and best-preserved feature, being intact with duff and soil concealing the original floor surface. The shop platform is distinct with an intact lower wall. Soil creep altered the upper retaining wall and forge. Young trees are taking hold on the dump's surface.

The resource possesses sound integrity on an archaeological level. The features clearly convey overall design of the surface facilities, as well as details of the whim pit. The site also has association, feeling, and setting is evocative of early prospecting.

First Centennial Significance

The First Centennial is both a contributing element of the landscape and potentially eligible for the NRHP and SRHP. Although small, the waste rock dump is one in a concentration of similar mines on Winnebago Hill's north slope, and the area is visible from vantage points north and west.

The site is potentially eligible under NRHP and SRHP Criteria A and C in the area of industry. The mine was among the earliest developed in Chase Gulch, and is a good archaeological example of its resource type. High potential for important buried features in the whim pit qualify the site for NRHP Criterion D and SRHP Criterion E.

First Centennial Management Recommendations

- *The site is among the more important in Chase Gulch because its surface facilities are characteristic of 1870s technology. Intact sites of the timeframe are rare.*
- Intensive site documentation and archival research, including objective significance evaluation. Necessary for heritage tourism and reversal of current ineligible status.
- Reverse current ineligibility status.
- Thin vegetation on dump, around horse whim pit, and on shop platform. Use extreme caution to minimize disturbance.
- Improve/expose blacksmith forge (under qualified archaeological monitor).

- Interpret with signage.
- Develop access trail from Gilpin Tramway bed below.

First Centennial Heritage Tourism Potential: High

Interpretive Signage. Although presently difficult to access, the site should be interpreted because of its importance and education potential. The site would be highly suitable as a location for signage describing Black Hawk's early mining history. Signage would also explain the site's history and 1860s mining technology.

Site 5GL.301 Queen of the West Mine ***Project: Basic Inventory***

The Queen of the West was among the early veins found in Chase Gulch, staked and probed with several shafts in 1861. The vein itself was developed through a tunnel (5GL.2172) during the late 1870s, which became the main point of ore production. The Queen of the West shaft was started in 1884 to intersect the tunnel, but the mine suspended before it was finished. Local investors bought the claim in 1897, sank the shaft deeper, and installed a hoisting plant. The shaft yielded regularly from the vein's depths until around 1914.

The Queen of the West site is presently an archaeological example of a combination shaft and tunnel mine. Historically, the mine featured a shaft, a steam-powered hoisting system, and blacksmith shop enclosed in a frame shaft house. A mining company sank the shaft downslope and east of the Gilpin Tramway railroad grade, on Winnebago Hill's northwest flank. Miners also drove a tunnel southwest along the vein, using the railroad bed as a platform. All buildings, structures, and equipment were removed long ago, and DRMS capped the shaft with concrete panels in 1987. An incomplete assemblage of archaeological features remains. Some features were lost to shaft collapse and others destroyed when the shaft was capped.

Queen of the West Mine Description

The shaft (F1) was originally an open stope approximately 4' wide and 44' long, whose rim slumped in and undermined surrounding ground. When DRMS capped the shaft, it first bulldozed in some waste rock and the shaft house platform as fill, and then installed the panels, which are 18'x44' in area. The waste rock dump (F2) is a distinct pad 100'x176' in area and 16' thick extending southeast. At one time, the shaft house stood on a large earthen pad south of the shaft, and as noted, DRMS pushed most of it in prior to installation of the panels. The platform's south half where the steam hoist and boilers were located remains partially intact today, and archaeological features reveal the original location of the machinery. The hoist foundation (F3) is a masonry footer 8'x10' in area studded with anchor bolts, the north portion having been cut away. The masonry setting for the boilers collapsed and is now a brick concentration (F4) 8'x14' in area with large ash and clinker dump extending east.

The tunnel (F5) is a well-formed crevice in rock 3' wide, 25' long, and 5' deep. Rubble now blocks the portal. Using ore cars, miners dumped waste rock downslope, depositing a

hummocky lobe (F6) 42'x65' in area and 4' thick.

The site possesses an impoverished artifact assemblage of structural materials and industrial refuse. Most structural materials such as lumber fragments, bricks, cut and wire nails, and window glass are distributed around the hoist foundation and on the waste rock dump's surface where the mine's buildings had been. Industrial refuse, primarily shop refuse, pipe scraps, and hardware, is mostly concentrated around the hoist foundation and in the clinker dump. In combination, dateable artifacts including cut and wire nails, amethyst and aqua glass, and hand-finished bottle fragments reflect an age range spanning the 1870s through around 1910.

Buried archaeological deposits are unlikely because refuse dumps and privy pits are absent. Further, the extremely steep deposition environment is not conducive to the accumulation of buried deposits.

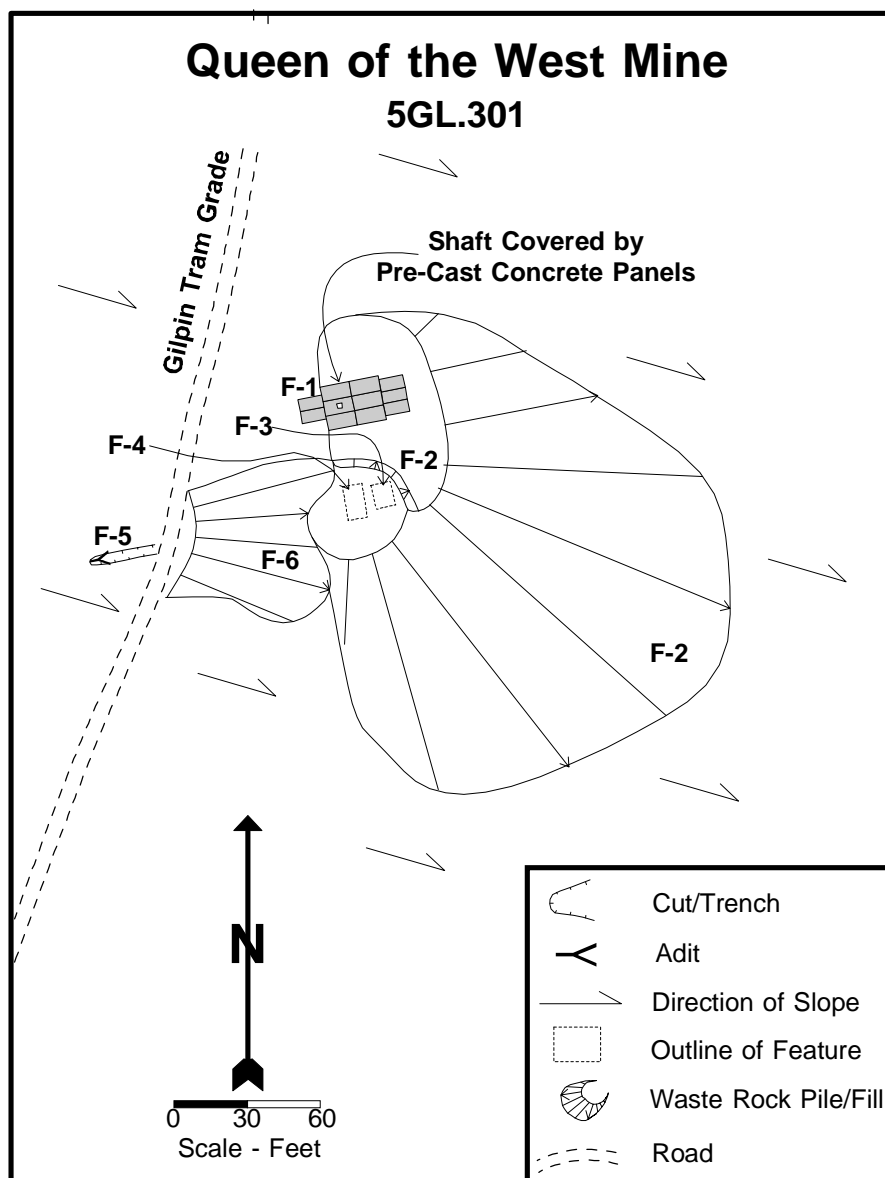


Figure 4.18: Plan view of Queen of the West Mine, 5GL.301.

Queen of the West Mine Condition and Integrity

Shaft collapse followed by invasive mine closure left the site in poor condition. The surface facilities and shaft are no longer well-represented because the feature assemblage has lost too many important elements. The shaft collapsed and drew in surrounding waste rock and any adjacent features, and DRMS pushed in more waste rock and the shaft house platform when it capped the opening. The Queen tunnel portal completely collapsed and became choked with rubble and brush, and is now difficult to perceive.

The resource possesses marginal integrity. Design, materials, and workmanship of the surface plant and its individual components are no longer apparent because too many archaeological features have been lost. The site also has little feeling because of the bulldozed ground. The setting is, however, intact.

Queen of the West Mine Significance

The site's primary value is as a prominent element of Chase Gulch's historic landscape. The waste rock dump is a prominent landmark on Winnebago Hill, visible from numerous vantage points. In addition, the dump compliments the distinct Gilpin Tramway railroad grade and its imposing rock walls.

Queen of the West Mine Management Recommendations

- Interpretive sign on Gilpin Tramway overlook, above site.
- Archival research to provide interpretive information.

Queen of the West Mine Heritage Tourism Potential: High

The site is a prominent landmark on the Gilpin Tramway bed, above and west. In combination, the tram bed, rock walls, capped shaft, and substantial dump create an interesting microenvironment characteristic of mining in Chase Gulch.

Interpret Site. A sign can explain the site's history and relationship to the Robert Emmett Mine (5GL.7.11), both on the same gold vein and under one owner.

Site 5GL.302 Sans Souci Mine ***Project: Land Disposal***

The Sans Souci, French for without a care, was a combination shaft and tunnel mine on Maryland Mountain's south face. Presently, a handful of archaeological features represent the relatively simple operation. The site is 8,640' elevation amid granite outcrops on an extremely steep south-facing slope overgrown with Gambel oak brush and a few second-growth ponderosa pines. Nearly the entire site is on BLM land.

In 1987, DRMS closed both the shaft and tunnel for safety reasons. DRMS registered with the site with OAHP but provided no actual documentation, and OAHP determined the site ineligible despite the lack of supporting information. DRMS then plugged the tunnel with a steel culvert, scraped the waste rock dump around the shaft, and installed concrete panels over it. The area where small-scale features were likely was bulldozed in the process. The site is currently ineligible but a prominent element of the landscape.

Sans Souci Mine History

Archival research found very little information about the site. Prospectors discovered the Virginia Extension Vein during the 1870s, trending northeast through Maryland Mountain. They staked the Sans Souci claim and sank a small shaft at the southwest end. The prospectors also drove a tunnel northeast underneath the rest of the claim. Nagle & Company extracted ore from the tunnel in 1881. Hal Sayr, a prominent Central City mine operator, purchased and patented the property in 1882, and worked the shaft. The vein was not especially rich, so Sayr quickly turned his attention to his better mines and ignored the Sans Souci. Lessees then produced small lots of ore during several short periods of time, with 1922 being the last.¹⁴

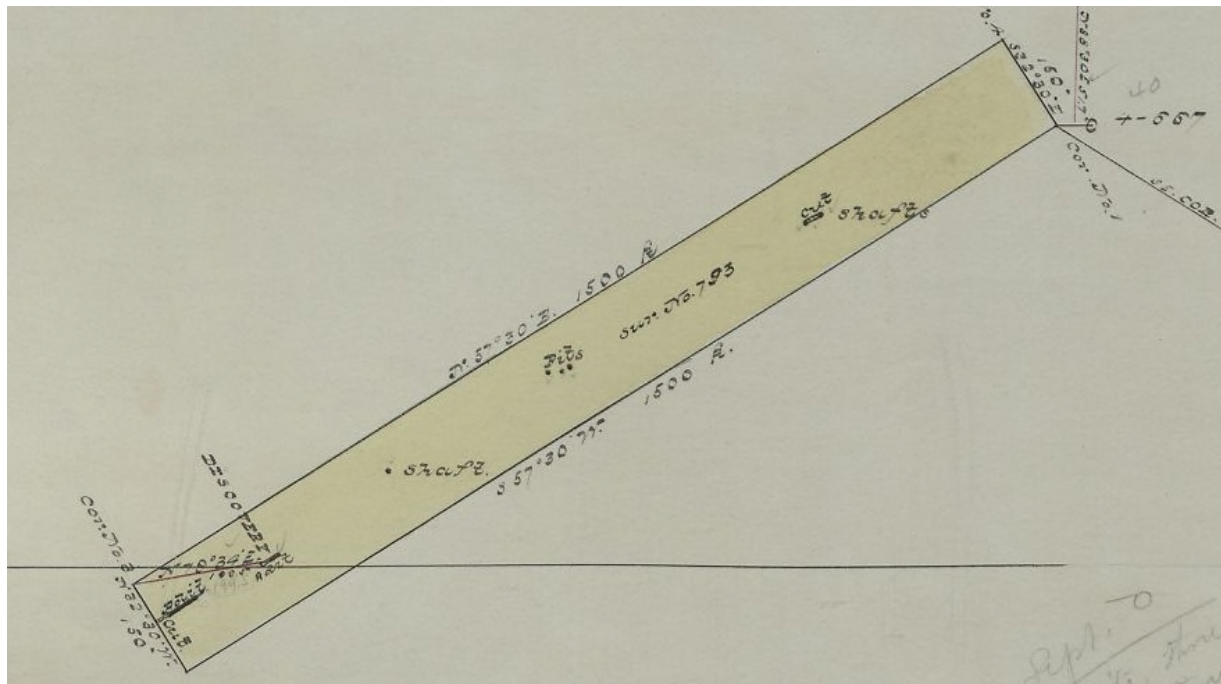


Figure 4.19: Today's Sans Souci site consists of the workings on the claim plat's lower left (southwest) end. The dark line marked Cut was developed into the site's adit (F2). Source: *Mineral Survey Claim Plat*, BLM.

¹⁴ *Mineral Claim Survey Plat: Sans Souci; Mineral Resources*, 1922:537; *Rocky Mountain News* 10/29/81 p2 c3.

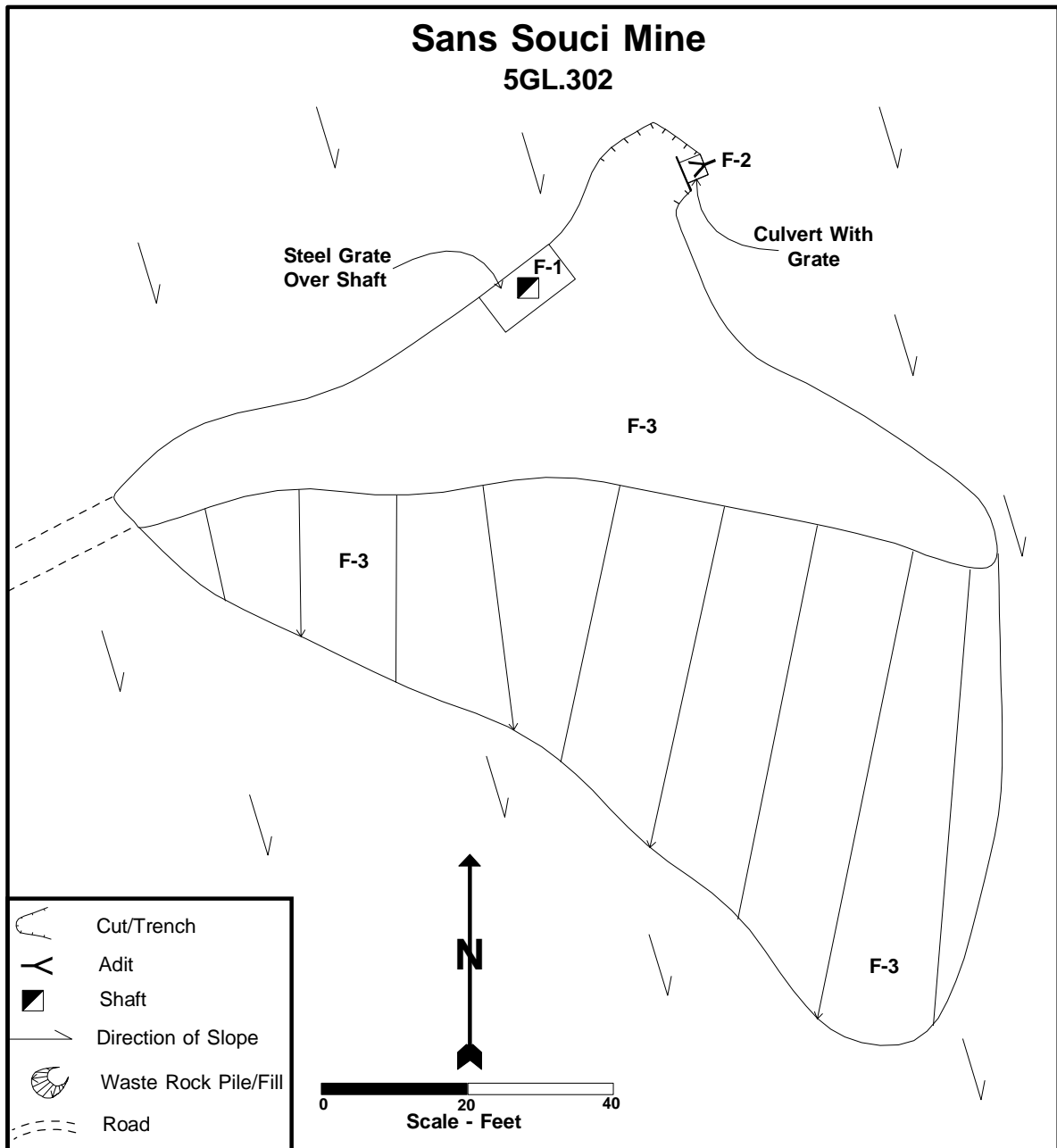


Figure 4.20: Plan view of the Sans Souci Mine, 5GL.302.

Sans Souci Mine Description

The Sans Souci site is very simple, limited to the shaft, tunnel, their combined waste rock dump, and a handful of artifacts. The shaft (F1) is presently open but was grated over by DRMS in 1987. As with many early shafts, the Sans Souci is slightly oval, 3'x6' in-the-clear, and vertical with poorly formed walls. The bottom appears to be around 70' deep, with drifts at 20' and 50' intervals. The northeast wall features several stulls (horizontal support timbers).

The tunnel (F2) extended northeast along the vein as depicted on the claim survey plat. DRMS sealed it with a grated culvert at the same time as the shaft, altering the portal and compromising its integrity as a historic feature. The tunnel now appears as a ragged trench 4' wide and 15' long with the culvert at the end.

When initially driving both the tunnel and shaft, miners used waste rock to build up a flat workspace. They erected a dry-laid rock wall around 6' high a short distance downslope and dumped the waste rock behind. The pad became both the mine's dump and an area for a simple blacksmith shop. As they continued work underground, the miners brought out more waste rock and dumped it around the original pad. In so doing, they engulfed the rock wall and built up a larger bench of material (F3) 95'x115' in area and 7' thick. After abandonment, the wall collapsed and erosion washed some of the waste rock downslope, creating furrows and gullies. The top-surface is now 22' wide and 100' long, and appears to have been scraped during mine closure. The bulldozing erased all evidence of surface facilities such as the shop.

The site offers an impoverished artifact assemblage limited to structural debris, track hardware, and a 1½" pipe segment. According to Jim Herron, some of the lumber was collapsed support timbering cleaned out of the tunnel during closure. The rest may have belonged to a shop. The lumber, cut and wire nails, and sheet iron are scattered on the dump's top-surface. The track hardware and pipe are on the dump's flanks. Buried archaeological deposits are absent because activity on-site was brief and limited to work underground, which tended not to generate materials in volume.

Sans Souci Mine Interpretation

The Sans Souci was a remarkably simple operation that never progressed beyond initial development. Although several parties produced a little ore, the property was, in essence, a deep prospect. Dateable artifacts reflect brief activity sometime during two broad timeframes. Cut nails date to the 1870s or 1880s, and wire nails and corrugated sheet iron after 1890. Archival sources specify 1881 and 1922, and allude to several other short periods in between. The artifact assemblage is characteristically sparse.

Regardless of exact timeframe, the surface facilities were elementary and the underground workings shallow. These qualities are more akin to prospects than mines. The shaft was only around 70' deep and the tunnel less than 300' long, both also featuring equally short drifts on the vein. The shaft had a manual windlass as a hoist instead of a mechanical unit. Windlasses had depth capacities of 100' or less. The tunnel's ore car track consisted of 12-pound rail, among the lightest duty available. The blacksmith shop was impermanent and left no lasting evidence or clearly attributable artifacts.

It appears that all involved with the property thought that the Virginia Extension Vein was marginal at best and would never generate wealth. Owner Hal Sayr was an experienced Central City mine operator, and although he took the trouble to purchase the San Souci, he determined that it did not merit meaningful investment. The lessees who actually worked the claim felt likewise, and their production was so meager, they did not even bother erecting an ore bin to store payrock. Rather, they probably sacked select batches for shipment to a mill.

Sans Souci Mine Condition and Integrity

The Sans Souci is in marginal condition, with mine closure in 1987 having impacted all the site's features. The shaft was capped with a grate, the tunnel plugged with a culvert, and the waste rock dump scraped with heavy equipment. The shaft is intact, but the tunnel lost its integrity and the bulldozing destroyed evidence of surface facilities such as a blacksmith shop footprint, however faint it might have been at the time. Erosion has also incised runnels into the waste rock dump's flank. The dump does, however, feature its original shape and profile.

The site possesses mixed integrity. Without a meaningful feature assemblage or intact buildings and structures, the site has no integrity of design, materials, or workmanship. The site is, however, intact enough for integrity of feeling and association. The setting is excellent.

Sans Souci Mine Significance

The Sans Souci's primary significance is as a prominent element of the historic landscape. Clearly visible high on Maryland Mountain's south face, the site conveys the feeling of mining and how widespread the industry was in Chase Gulch.

Individually, the Sans Souci is recommended ineligible because it was unimportant and integrity is insufficient. Regarding Criterion A, the mine was worked only briefly by several small parties, was never a substantial employer, yielded little ore, and was not involved in important historical trends. In terms of Criterion B, archival research could not establish the direct presence of an important person. Under Criterion C, the Sans Souci is no longer a good example of its resource type, a combination shaft and tunnel mine. Closure in 1987 erased any character-defining features that may have been present at one time. The site also will not yield important information upon further study because it lacks buried deposits, complex feature systems, or a rich surface artifact assemblage.

Sans Souci Mine Management Recommendations

In terms of Section 106 compliance, the entire site lies on BLM land and is a prominent element of the landscape. The site's transfer out federal domain will be an adverse effect to the landscape. Mitigation may be required.

Sans Souci Mine Heritage Tourism Potential: Medium

The site has some heritage tourism potential as a good overlook for Chase Gulch and Winnebago Hill. The historic wagon road ascending to the site is a ready-made trail.

Site 5GL.398 Troublesome Mine ***Project: Land Disposal***

The Troublesome Mine is a poorly preserved archaeological site representing a small-scale shaft operation. The site is on Winnebago Hill's western crest at 8,785' elevation, and is

notable from several vantage points. The hill crest slopes gently away to the south and is overgrown with open meadow, while to the north, slopes are abruptly steep with young aspen groves grading into doghair fir forest. The shaft was sunk in the middle of the Troublesome claim, trending northeast-southwest, but the waste rock dump extends north and south onto adjoining BLM land.

The shaft collapsed long after the mine was abandoned and became a hazardous funnel around 20' in diameter. DRMS included it in a 1989 closure project, registering the site under the mistaken name of Huddleston but providing no actual documentation. DRMS recommended the site ineligible, and OAHP concurred despite the lack of supporting information. DRMS then poured a concrete plug into the shaft and bulldozed in some of the shaft house platform and waste rock dump. Small-scale features were destroyed in the process.

Troublesome Mine History

The Troublesome Mine lived up to its name, its gold vein proving tantalizing but difficult to profit from. Prospectors staked the Troublesome claim over the vein and then, during the 1870s, probed its length with a series of seventeen pits and shafts. The center-most shafts encountered enough gold ore to encourage the prospectors in sinking them deeper. The ore continued, so the outfit drove drifts northeast and southwest along the vein and began minor production. Around this time, William C. Stevens became involved and provided money for underground development and two shaft houses. But then the better ore was exhausted and the remaining low-grade material was not worth mining, so Stevens let the property become idle. He eventually tried to salvage some of his investment by selling an interest in the property.¹⁵

J.P. Olympius of Denver was part owner by the late 1890s. He thought much of the low-grade ore would be profitable with better development and a steam hoisting system to raise it in greater tonnages than by hand. So Olympius spent the money and quickly ran into the same problems as Stevens, in that the ore deteriorated in quality as miners worked the vein. And yet, Olympius hadn't given up. He patiently invested in exploration as best he could during the next ten years and his pair of miners finally encountered a rich gold stringer southwest of the shaft. The high-grade ore was quickly exhausted, but inspired optimism. After several more years of fitful development and minor production, miners encountered another gold stringer, this time capable of sustained yield. The Troublesome then joined the mining district's ranks of solid properties from 1913 through 1917. Miners lost the vein again, and Olympius suspended operations. It may be that Stevens died around that time as well, creating legal issues. The Troublesome then lay abandoned for fifteen years with very -grade ore still underground.¹⁶

When President Franklin Roosevelt increased gold's value from around \$20 to \$35 per ounce in 1934, older miners sorted through their memories hoping to recall which mines closed prior to final exhaustion. Someone remembered the Troublesome, and Michael Vranesic and W.I. Duke confirmed low-grade ore in the deteriorating workings. They took a lease in 1934 and installed a new light-duty surface plant consisting of a two-post gallows headframe and hoist house enclosing gasoline hoist, air compressor, and shop. In need of immediate income, the partners started by blasting out pillars of ore left in support of the old stopes. The returns then paid for underground development with good results. From 1936 through 1938, a crew of six

¹⁵ *Mineral Claim Survey Plat: Troublesome.*

¹⁶ Colorado Mine Inspection Reports: Troublesome; *Mineral Resources*, 1913:254; *Mineral Resources*, 1917:822; "Mining News" *EMJ* 7/23/98 p106; "Mining News" *EMJ* 7/4/08 p48.

miners worked the mine on a pay-as-you-go basis, developing ore, extracting it, and developing a little more. But the cycle ended in 1938 when the outfit sank the shaft to a depth of 400' and reached the vein's bottom.¹⁷

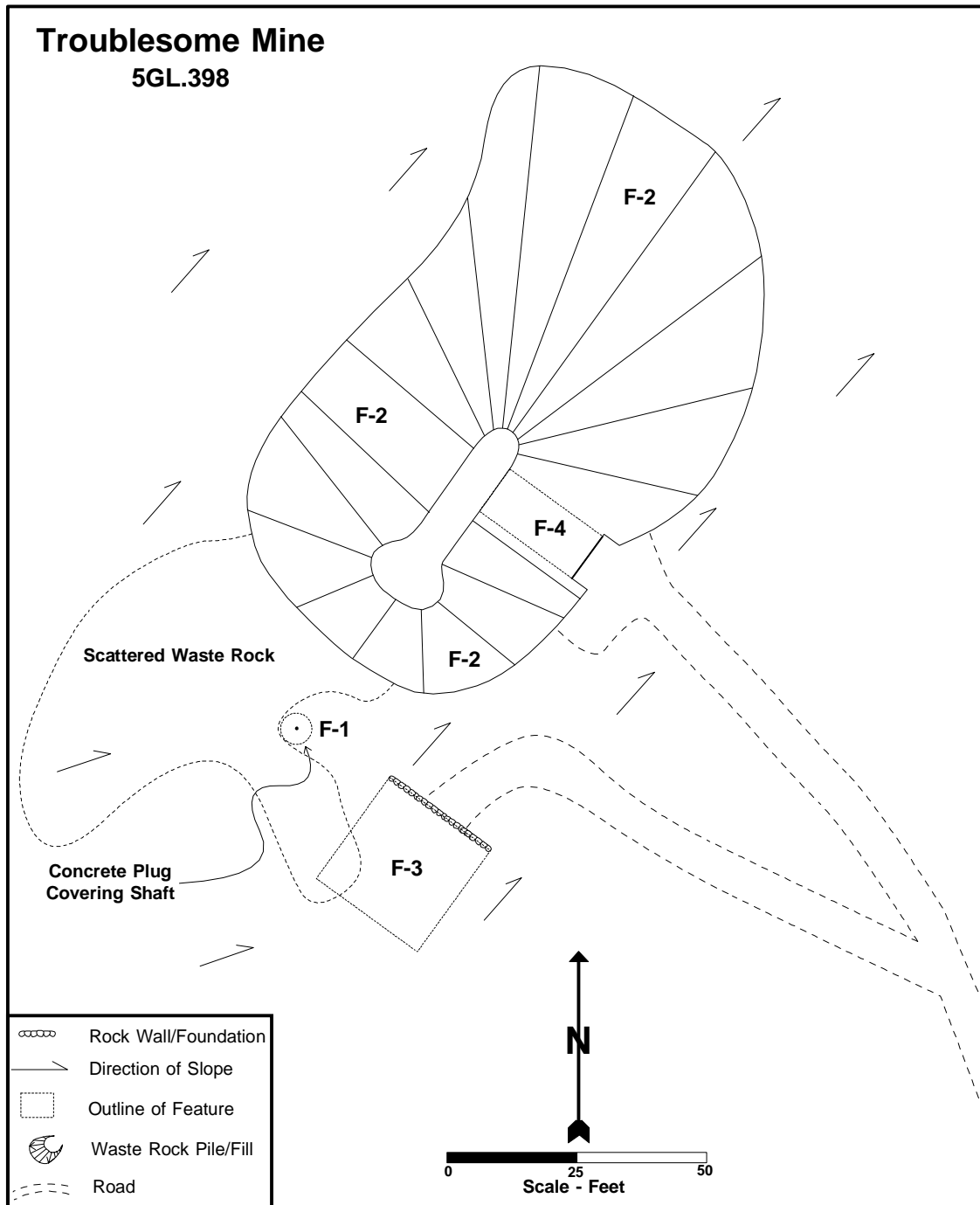


Figure 4.21: Plan view of the Troublesome Mine, 5GL.398.

¹⁷ Colorado Mine Inspection Reports: Troublesome.

Troublesome Mine Description

A simple site, the Troublesome is limited to the shaft, its waste rock dump, a shaft house platform, and ore bin foundation. All the features are too damaged to clearly convey the site's history. Having been closed in 1989, the shaft (F1) presently manifests as a bulldozed depression 14' in diameter and 9' deep with no original form. The waste rock dump (F2) was originally a pad of material 62'x119' in area and 12' thick. Miners had graded its top-surface flat for workspace and an ore car track. Long ago, the dump's southwestern portion slumped into the shaft when its collar collapsed, and then DRMS pushed in more when closing the shaft in 1989. In preparation, DRMS also bulldozed structural ruins and a collapsed headframe into a push-pile to the east.

Historically, a frame shaft house enclosed the shaft, hoisting system, and shop. The building was about 25'x70' in plan on a platform (F3) of waste rock fill extending southeast from the shaft. A dry-laid rock wall 5' high retained the platform's southeastern 25'. This is presently the only identifiable portion, the platform's remainder having been destroyed. The northwestern end slumped into the shaft when its collar collapsed, and DRMS bulldozed in the rest. Important small-scale features at one time around the shaft collar have been lost.

In 1935, Vranesic and Duke erected a sloped-floor ore bin (F4) on the waste rock dump's east flank. The structure consisted of a plank floor and walls supported by stringers resting on log pilings embedded in the dump. Everything has been removed except for the pilings, whose pattern indicates that the bin was 10' wide and 22' long. Three pilings and remnants of log cross-members are prominent at the dump's toe, while several more pilings are less obvious on the dump's shoulder.

The site offers a fairly intact artifact assemblage. Structural materials primarily from the Vranesic operation surround the shaft, extend downslope from the shaft house platform, and lie scattered on the dump. The materials include lumber, timbers, corrugated and smooth sheet iron, and hardware. Industrial refuse is similarly distributed and consists of blacksmith waste, general hardware, and electrical insulator, and a blasting powder keg. Fragmented bottle glass, food and liquid cans, a boot, and decorative carnival glass are scattered around.

Buried archaeological deposits are absent. Privy pits could not be found, and activity on-site did not generate sufficient strata.

Troublesome Mine Condition and Integrity

The Troublesome is in poor condition, mine closure in 1989 having impacted all the site's features except for the ore bin foundation. The shaft was plugged with concrete, and the surrounding shaft house platform and waste rock dump pushed in with heavy equipment. Evidence of the mine's hoist, compressor, shop, and small-scale facilities were destroyed either by shaft collapse or the closure. All buildings and the ore bin were long gone by that time. Young aspens are now overtaking the site.

The site possesses impaired integrity. Without a meaningful feature assemblage or intact buildings and structures, the site has no integrity of design, materials, or workmanship. The site is, however, intact enough for integrity of feeling. The Winnebago Hill crest setting is excellent.

Troublesome Mine Significance

The Troublesome's primary significance is as a contributing element of the historic landscape. Visible from nearby vantage points, the site contributes to the feeling of mining and how widespread the industry was in the area.

As an individual site, the Troublesome is recommended ineligible because it was an unimportant mine and integrity is insufficient. Regarding Criterion A, the mine was worked only briefly by several small parties, was never a substantial employer, yielded little ore, and was not involved in important historical trends. In terms of Criterion B, archival research could not establish the direct presence of an important person. Under Criterion C, the Troublesome is no longer a good example of its resource type, a shaft mine. Shaft collapse and closure in 1989 erased most character-defining features present at one time. The site also will not yield important information upon further study because it lacks buried deposits, complex feature systems, or a rich surface artifact assemblage.

Troublesome Mine Management Recommendations

In terms of Section 106 compliance, the site's southern and northern tips extend onto BLM tracts, and the site is a contributing element of the landscape. The tracts' transfer out federal domain will be an adverse effect to the landscape. Mitigation may be required.

Troublesome Mine Heritage Tourism Potential: None

No potential, most of the site is private.

Site 5GL.613 South Bend Mine ***Project: Basic Inventory***

The South Bend Mine was little more than a tunnel sited on the north side of Chase Gulch, at the end of Chase Street. The tunnel was driven northeast along the South Bend Vein, cutting through the granite outcrops of Maryland Mountain's southeast spur. Prospectors probably identified the vein during the 1870s, staked a claim by the same name, and bored the tunnel. In 1992, DRMS closed the tunnel by inserting a grate deep within the portal, causing no effect. DRMS registered but did not record the site, and OAHP determined it ineligible. The tunnel was included in the Basic Inventory but not re-recorded, and a photograph and map of the resource are unavailable.

South Bend Description

The site is limited to the South Bend Tunnel, no more than a hole in bedrock on Chase Gulch's north floor. Construction of Chase Street decades ago erased the waste rock dump and evidence of surface facilities, if any existed. The hole is barely discernable today.

South Bend Mine Condition and Integrity

The site is in poor condition because it lacks features other than the tunnel portal. Further, the area in front of the portal was widened and paved as Chase Street.

Without historic features, the site has no integrity.

South Bend Mine Significance

The South Bend lacks significance. A nearly invisible hole, the site has no visual presence and does not contribute to the landscape. Without a feature assemblage, the site is not an example of its resource type, a tunnel mine.

South Bend Mine Management Recommendations

No actions are recommended

Site 5GL.616 Golden Gilpin Mill ***Project: Basic Inventory***

The Golden Gilpin Mill is among the few functional historic concentration plants in Colorado. The Golden Gilpin was built around 1912 on the site of the earlier Meade Mill and processed complex ore through the remainder of the 1910s. The Golden Gilpin played an important role by supporting Gilpin County's 1930s mining revival, and operated as late as 1974. The author saw it in motion during the mid-1990s. The plant is located north of Black Hawk on the North Fork of Clear Creek clearly visible from Highway 119.

The site was registered with OAHP in 1993 by an unlisted party for an Environmental Protection Agency cleanup of its tailings pond. The party did not actually record the site and provided almost no information, recommending it ineligible despite its historic date and functional state. OAHP concurred, even though the form offered no supporting information. The ineligibility status should be reversed.

The mill was not initially included in the 2014 Basic Inventory because it is privately owned. But the mill's significance is overwhelming and it was added to the inventory project for that reason, toward the end of fieldwork. The site was not fully documented or described, and yet the slim information below is sufficient to support an eligibility estimate and management suggestions.

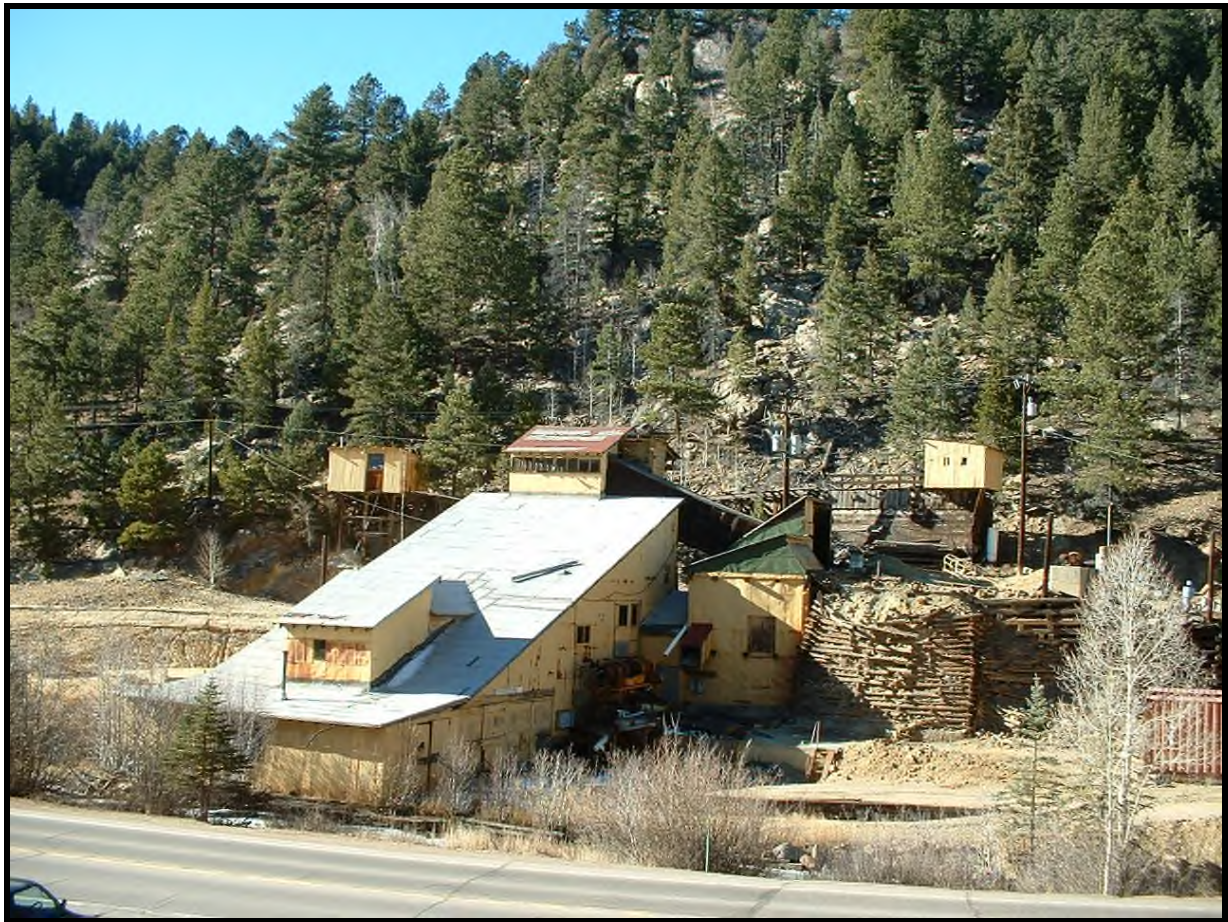


Figure 4.22: Northwest view of the Golden Gilpin Mill, 5GL.616. The mill was built in 1912, modified during the 1930s, and last processed ore in 1974. The plant is still functional. Highway 119 is in the foreground.

Golden Gilpin Mill Description

The Golden Gilpin Mill is a concentration plant capable of processing complex ore in present day. The site includes the main mill building and its machinery, an outbuilding, ore receiving structure, conveyor system, and several platforms. The feature assemblage was built on a series of terraces graded over the canyon floor. A combination of historic machinery and recent industrial materials is scattered around the site's northeastern portion. The buildings and structures retain their original yellow paint, with a sign stating Gold Gilpin over the mill's lower entry. Although not closely inspected, the mill, outbuilding, and terraces appear original to 1912, while the ore receiving and conveyor systems likely date to the 1930s. Electric motors power all machinery. Full documentation is necessary for a more detailed description.

Golden Gilpin Mill Condition and Integrity

The Golden Gilpin site is in good condition. All facilities and systems are intact and functional, with the mill, outbuilding, and terraces having changed little since 1912. The plant's ore receiving and conveyor systems reflect construction during the 1930s. The machinery inside the mill is complete, the ore treatment flow-path featuring appliances from 1912, the 1930s, and

possibly 1974. The buildings and structures exhibit weathering, with dry-rot affecting some woodwork associated with the ore receiving structure. Log cribbing retaining the ore receiving terrace also suffers dry-rot, and a small section has collapsed. Ground on the terraces around the mill has been lightly scraped by a bulldozer, and tailings ponds to the southwest have been stabilized.

The site retains high integrity. Complete and operational, with most components dating to 1912 and the 1930s, the mill has integrity of design, materials, workmanship, feeling, and association. Integrity applies to the entire complex, its structures and buildings, and the mill interior in its details. On the north edge of Black Hawk, and surrounded by small-scale prospects, the site also has integrity of setting.

Golden Gilpin Mill Significance

The significance of the Golden Gilpin Mill cannot be overstated. The mill is both a prominent element of the landscape and potentially eligible for the NRHP and SRHP. The facility is a major landmark on Black Hawk's north edge, plainly visible from Highway 119. The complex conveys a strong sense of Black Hawk's mining industry, and is a tangible representation of the town's role as Gilpin County's milling center.

The site is potentially eligible under NRHP and SRHP Criteria A, C, and D in the areas of industry, architecture, and engineering. The site was historically important for its support of the mining industry during the 1910s and 1930s. The support came from the mill's role as an ore processing plant, converting crude ore into concentrates shipped to a smelter for final treatment. The mill is also an outstanding example of its resource type, a concentration mill. High potential for important information qualifies the site for NRHP Criterion D and SRHP Criterion E. In particular, analysis of the facility in its details will reveal information regarding how concentration mills were designed, equipped, and operated.

Golden Gilpin Mill Management Recommendations

The site is among the more important in Colorado because it is one of a few period mills still capable of processing ore.

- The City of Black Hawk should consider purchasing the property, receiving it as a donation, or seeking a preservation easement. Environmental and safety liability exemptions may be possible. The city might consider partnering with Gilpin County in pursuing an appropriate strategy.
- Intensive site documentation and archival research is warranted, including objective significance evaluation. This is necessary for heritage tourism and reversal of current ineligible status.
- Reverse current ineligibility status.
- Assess stability of buildings and structures. Preserve and stabilize as needed.
- Consult with experienced mill experts on how to run the plant. Experts are available.
- Interpret with signage.
- Docent tours. Run the mill briefly for visitors. Upper and lower levels can be made ADA-accessible.

Golden Gilpin Mill Heritage Tourism Potential: High

The Golden Gilpin provides visitors with the extremely rare opportunity to examine a functional concentration mill in all its details.

Interpretive Signage. The site should be interpreted because of its importance, rarity, and education potential. Signage would explain the site's history, Black Hawk's history as a milling center, and how ore was processed.

Docent Tours. Docents can lead visitors through the plant, explaining history and operation. The mill can be briefly run for visitors.

Site 5GL.644 Smith Mine
Project: Land Disposal

Resource Type: Stope

A stope was an underground chamber where ore was blasted from a vein. Stopes were usually components of mines, which also included an entry into the vein and support facilities on the surface. In some cases, veins cropped out on the surface, and their removal left substantial incisions in the ground. Occasionally, the stope was the mine in entirety, serving as underground entry, source of ore, and focus of surface facilities, all in one. Stopes that were mines in themselves can qualify as a resource type.

The Smith Mine is among Black Hawk's earliest. In 1859, knowledgeable prospectors identified a gold vein trending northeast through Maryland Mountain's southeast spur and claimed it as the Smith. They developed it through shallow open-cuts at first, and later through deeper stopes. Eventually, Black Hawk's Chase Street neighborhood grew around the mine. The site presently features stopes, open-cuts, and evidence of simple surface facilities amid granite outcrops and ledges. Combined with the granite and Chase Street's historic architecture, the site helps define Black Hawk as not only a milling center, but also as a mining town in itself.

Nearly the entire site lies on a narrow BLM land tract. Surrounding slopes are extremely steep, southeast-facing, and overgrown with Gambel oak brush and ponderosa pines amid the outcrops. The Gilpin Tramway railroad grade passes by the site's head while Chase Street's houses are below. Elevation is 8,200'.

DRMS registered the site with OAHP for a closure project in 1993 but completed no actual documentation. Despite the lack of supporting information, OAHP determined the site ineligible, and DRMS then installed grates over the two stopes. The closures were carefully fitted and maintain the site's integrity, posing no adverse effect.

Smith Mine History

The Smith Mine was a direct product of the Gregory gold discoveries of 1859. At that time, prospectors knowledgeable about hardrock gold discovered a robust vein crossing northeast through Maryland Mountain's granite outcrops. They claimed it as the Smith and, as with similar properties, gouged out surface quartz, crushed it, and washed the sand-like ore in sluices. As they

blasted deeper, the prospectors sent small batches of ore to area stamp mills until the easily treated material was gone. The property then remained idle for a decade.¹⁸

William Lindsey was the first to reopen the Smith and work it on a meaningful scale, leasing the mine from owner J.H. Sayr during the mid-1870s. At that time, the vein was developed through a relatively shallow 125' shaft with short underground passages. In them, he found rich gold ore that was complex but treatable in the area's improved mills. During several years, Lindsey realized \$31,000 from small batches, convincing expert mine operator Harper M. Orahood of the property's worth. Sure that that the vein offered better ore at depth, Orahood bought the claim in 1878 and hired several professional miners to better develop it. They extracted small lots of ore for only several years and then reached the vein's end. The Smith was never worked on a substantial basis again.¹⁹

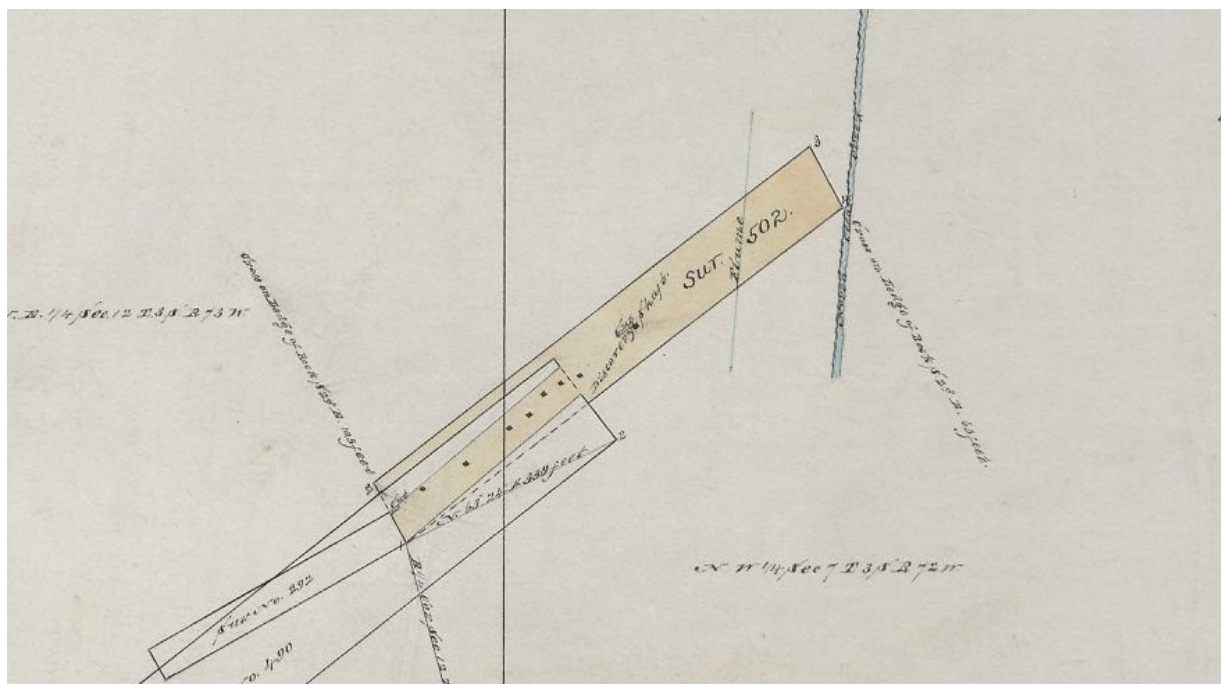


Figure 4.23: On the 1878 survey plat, the series of shallow shafts on the claim's southwestern half corresponds to the stopes and cuts (F1-F12) in today's site. The Discovery Shaft at center is a prospect cut (F13) at the site's northeastern end. Source: *Mineral Claim Survey Plat*, BLM.

Smith Mine Description

As an archaeological resource, the Smith features a well-defined series of stopes and prospect workings on the vein. The prospect workings are the site's earliest features, almost certainly dating to the initial search in 1859. As was common, when prospectors discovered a vein through surface probes, they dug additional ones to track the vein's strike and confirm the presence of ore. So it was with the Smith.

¹⁸ Wickersheim and LeBaron, 2005:218.

¹⁹ Fossett, 1876:237; *Mineral Claim Survey Plat: Smith*; *Rocky Mountain News* 2/21/77 p4 c3; Wickersheim and LeBaron, 2005:218.

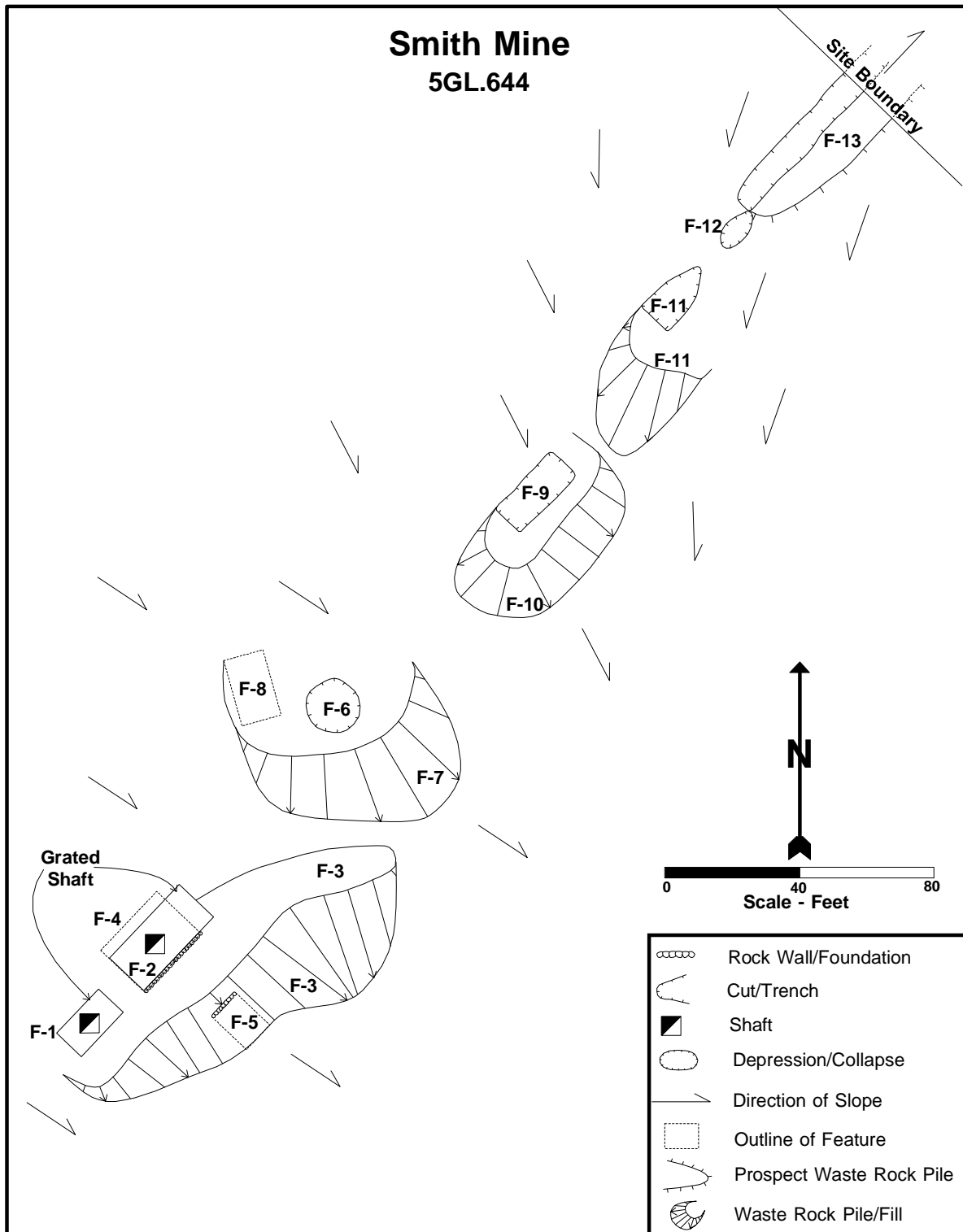


Figure 4.24: Plan view of the Smith Mine, 5GL.644.

The prospectors found the vein in one of two cuts blasted into bedrock (F9 and F13), extracting a little surface ore from both. The cuts are distinct today, with F9 being 3' wide, 24' long, and 8' deep, while F13 is 5' wide, 47' long, and 6' deep. Around the same time, the prospectors also sank a shallow shaft (F12) to test the vein at greater depth. The shaft is presently open, 4'x6' in area with poorly formed ragged collar and walls, and only 7' down to rubble fill. The shaft was deeper, and although probably not the site's first probe, an 1878 claim plat labels it Discovery Shaft. All the prospects are well-preserved.

The prospectors moved downslope and southwest to the vein's richest portion, cleared off overburden, and then worked it from the top down, extracting ore as they went. They created two open stopes linked by a rock bridge 10' long. The southwestern stope (F1) is now an open incision 8' wide, 18' long, and 20' deep. The second stope (F2) yielded ore in itself and also served as the mine's main shaft from which lateral drifts were worked. The stope is 8' wide, 30' long, and around 30' down to water. In its southwestern third, miners created two hoisting compartments similar to those found in shafts, with log cribbing. The cribbing not only defined the hoisting compartments, but also supported the stope's walls. Well-preserved, the structure extends 10' down and ends, its two compartments being 4'x4½' in-the-clear. In 1993, DRMS carefully fitted grates over the stope openings, maintaining their integrity.

When developing the underground workings, miners dumped waste rock northeast and southwest along the slope. In so doing, they deposited a bench of mineralized material (F3) 115' across, 40' downslope, and 6' thick. They also graded the top-surface flat, which is also 115' across but only 12' to 20' wide.

The stopes featured simple and light-duty surface facilities typical of the 1860s and 1870s. A shaft house stood over the main stope, enclosing a hoist, ore sorting station, and ore chute. Workers graded a cut-and-fill platform (F4) 18'x24' in area for the building, cutting the northwest half from the slope and using waste rock for the southeast. They arranged a dry-laid foundation of tabular rocks and erected the building over the yawning stope underneath. When the mine was abandoned, all structural elements were removed and sheetwash deposited sediment over the platform, whose footprint and southeastern foundation alignment are still clearly defined. The hoist was probably a hand windlass on timbers over the shaft, leaving no permanent evidence. Artifacts are absent.

An ore bin stood on the waste rock dump's flank immediately below the stope. The bin was a sloped-floor type 10'x14' in area on a foundation of dry-laid rock walls (F5), which are all that remain. The partially collapsed walls are 10' wide and around 3' high.

Miners developed the vein through another opening to the northeast, and it was either a shaft or stope. The entry was used for production and thus had a shaft house similar to the above. The entry has since imploded and is now a depression (F6) 16' in diameter and 2' deep with 80-year old trees growing around the rim. The dump was a bench of material (F7) 25'x55' in area and 5' thick extending east-west across the slope. Its toe was originally retained by a rock wall, much of which has collapsed. A frame shaft house enclosed the midlevel entry and another ore sorting station. Only a cut-and-fill platform (F8) remains. The platform is 12'x20' in area with a steep cut-bank. Erosion deposited sheetwash over the surface, concealing artifacts and a distinct building footprint.

The site has an elementary artifact assemblage limited to cut and wire nails, and a pipe segment and fitting at the main stope. The assemblage lacks items characteristic of blacksmithing, mechanized hoisting, use of steam, or substantial buildings.

Smith Mine Interpretation

The Smith was like many early mines in the area. It yielded rich ore for a short time from surface scratchings, luring miners to follow the vein as deep as their primitive equipment allowed. The miners worked the vein downward, removing ore in a labor-intensive and unsystematic way as they went, until the easily treated material was gone. At the Smith, the early miners either lost the ore-bearing zone altogether (ran into cap), or merely encountered the complex, refractory material unworkable in stamp mills and had to leave it in place.

The Smith was also like the area's early mines in that the vein's quirky, inconsistent nature fooled experienced operators into believing it would improve with depth. Harper Orahood bought the mine and found out the hard way that the vein was, in fact, nearly exhausted.

For the above reasons, none of the Smith's owners invested much in the property. The initial owners probably had little capital, in short supply during the early 1860s, and had no need for a costly, mechanized surface plant. They were able to get by with a hand windlass, ore bucket, and simple shaft house with little more than an ore sorting station. The mine apparently lacked a blacksmith shop. The miners probably paid a commercial establishment somewhere in town. Orahood also did not invest heavily in the property when he realized that the vein would not return the money.

Archival sources are the best means for determining the site's specific timeframes, as the assemblage of dateable artifacts is poor. Cut nails generalize activity to sometime before 1890. But, the artifact assemblage also offers wire nails, indicating some work after 1890, which is a period not mentioned in archival sources.

Smith Mine Condition and Integrity

The site's condition is mixed. The prospect workings are well-preserved but partially filled with rubble and sediment, and the two main stopes are also fairly intact despite being grated over. The waste rock dumps retain original surfaces, footprints, and profiles, and have been slightly affected by erosion. The two shaft house platforms are clearly evident, but sheetwash has deposited sediment on their surfaces, concealing any small artifacts that might be present. The site's artifact assemblage is severely impoverished, with the types of materials usually found at mines being absent such as blacksmithing refuse and hardware. It may be that erosion washed away some items and buried others with sand, while Chase Street residents could have picked up additional artifacts. The incomplete assemblage makes the site difficult to date and interpret.

The site has mixed integrity. The overall pattern of prospecting, initial development, and deeper work in the stopes is apparent and qualifies as design in a broad sense. But without better feature and artifact assemblages, design of the surface facilities is uncertain, and the site has no integrity of materials or workmanship. But, location amid granite formations immediately above Chase Street and its period architecture are a setting conveying a strong sense of feeling and association.

Smith Mine Significance

The Smith's principal significance is as a prominent element of the landscape. The series of stopes, prospect cuts, and their dumps are a plainly visible landmark on the mountainside

above Chase Street. Combined with the natural qualities and period houses, the site strongly conveys a sense of Black Hawk as a mining town.

Despite an early time period, the site is recommended individually ineligible. Regarding Criterion A, the Smith initially yielded gold in 1859, placing the property among Colorado's earliest hardrock mines. But, the site lacks sufficient integrity relative to the period, subsequent mining having changed or erased evidence of initial activity. Archival research was unable to establish a physical link between the Smith and important people, nullifying Criterion B. Under Criterion C, the site in its present condition is not intact enough for eligibility. The site lacks aspects clearly attributable to a particular timeframe, the existing features potentially ranging in age from the 1860s through 1880s. Dateable artifacts and archival information are insufficient to better pinpoint the timeframe of the site's features. The site also will not yield meaningful information upon further study because it lacks buried deposits, complex feature systems, or a rich artifact assemblage.

Smith Mine Management Recommendations

Regarding Section 106, the Smith is an important contributing element of the landscape and lies, in large part, on BLM land. Transfer of that land from the federal and over to local government domain could affect the landscape, and is thus an adverse effect. Mitigation may be required.

Several management actions are suggested in the interest of planning and heritage tourism. The Smith Mine has high potential because of its location and history as one of Black Hawk's earliest hardrock mines.

- Grade trail from open space parking at end of Chase Street, up through site, to Gilpin Tramway.
- In-depth archival research for interpretive material.
- Interpretive signs on-site explaining history of site, Black Hawk's early hardrock mining, and difficulty posed by gold veins.

Smith Mine Heritage Tourism Potential: High

Connector Trail. A trail could connect open space parking on Chase Street with Gilpin Tramway. The trail would ascend through the site, passing the stopes and winding through prospect cuts, and connect with the tramway at a prominent overlook point. The trail would convey the feeling of mining.

Interpretive Signage on-site would explain history of the Smith, early hardrock mining, and the difficulty presented by quirky gold veins.

Overlook Point. The Gilpin Tramway wraps around Maryland Mountain's southeast spur immediately above the Smith. The point is exposed and an ideal overlook. Interpretive signage may be appropriate.

Site 5GL.720 Second Discovery of Virginia
Project: Basic Inventory

Prospectors staked the Second Discovery of Virginia on Maryland Mountain's southeast face. The claim's narrow width and great length is characteristic of the 1860s, placing it among the earliest in Chase Gulch. Around 1873, Theodore H. Becker consolidated the claim with two neighboring properties under the Second Discovery name. He then probed the group with a series of pits, trenches, and shallow shafts, none producing much gold.

In 1996, DRMS closed the shafts by pushing in waste rock, damaging if not erasing small-scale features. Prior, DRMS registered the site with OAHP but did not actually record the assemblage or conduct substantive archival research. DRMS argued that the site was ineligible and OAHP concurred despite the lack of supporting information.

The site was included in the 2014 Basic Inventory because of its landscape potential, but was not recorded due to insufficient integrity. The discussion below is brief, and a map and photographs are unavailable.

Second Discovery of Virginia Description

The site encompasses a northeast-southwest series of prospect pits, trenches, and shafts. Only four shafts are prominent while the remainder of features is subtle and largely concealed by brush and grass. The shafts manifest as craters surrounded by waste rock dumps approximately 40' in diameter and 3' to 6' thick. Heavy equipment destroyed associated features representing surface facilities. Although the shafts were closed by backfilling, their dumps are visible enough to contribute detail to the landscape. The prospect pits and trenches are scattered haphazardly between the shafts.

Second Discovery of Virginia Condition and Integrity

The site is in marginal condition. A bulldozer closed the shafts by pushing waste rock, destroying all small-scale features that might have been adjacent at one time. The closure avoided the site's prospect pits and trenches, still discernable in a rough alignment. Gambel oak brush has overgrown the workings.

The site has mixed integrity. The prospect pits and trenches somewhat convey an attempt to sample several mineralized veins with a linear strategy. Mine closure, however, damaged the shafts and associated features. Without buildings, structures, or discernable surface facilities, the site has no integrity of design, materials, or workmanship. The site's integrity of feeling and association are diluted by brush overgrowth, which conceals surface excavations. The setting is excellent.

Second Discovery of Virginia Significance

The site's principal value is as a contributing element of the landscape. The small waste rock dumps associated with the shafts are visible from vantage points on Winnebago and Bates hills to the south. The dumps contribute detail characteristic of prospecting. The site otherwise lacks sufficient integrity for individual eligibility.

Second Discovery of Virginia Management Recommendations

No recommendations.

Second Discovery of Virginia Heritage Tourism Potential: None

No tourism potential.

Site 5GL.721 Mary Ella No.2 Mine ***Project: Basic Inventory***

The Mary Ella No.2 is a poorly preserved archaeological example of a shaft mine, the resource type. The site is limited to a shaft, its dump, and remnants of a shaft house platform high on Maryland Mountain's southeast spur. Archival research found no information under Mary Ella No.2, and the site's timeframe is thus unknown.

In 1996, DRMS closed the shaft by bulldozing in much of the waste rock dump and surrounding ground, and then installing concrete panels. The closure destroyed nearly all historical attributes. DRMS registered but did not actually record the site in advance, and OAHP determined it ineligible. The site was included in the 2014 Basic Inventory because of its substantial size and remnants of historic features, albeit severely damaged.

Mary Ella No.2 Mine Description

Originally, the mine featured a frame shaft house enclosing the shaft collar, a hoisting system, and shop, all on a substantial earthen platform cut from a steep slope. A stout rock wall retained the platform's fill-bank. Miners dumped waste rock downslope from the shaft, building up a massive mound of material. Other surface facilities may have been present at one time in addition to the shaft house.

Nearly everything was destroyed by the 1996 mine closure. The waste rock dump's top half was bulldozed into the shaft as backfill, and the shaft capped with concrete panels. In the process, most of the shaft house platform, with its small-scale features, was sliced away. The shaft is now a crater 20' in diameter with panels at bottom, surrounded by a bulldozed waste rock mound 60'x70' in area and 12' thick. Above and west is a narrow bench 20' long and only 10' wide where the shaft house platform had been. The platform was much larger and the dump higher prior to closure. Overall, the site presently appears as little more than a bulldozed dump.

The site possesses only a handful of artifacts, most items having been lost during the closure. Buried archaeological deposits are absent because activity tended not to generate material in volume, which was thrown out onto ground-surface. Further, the extremely steep deposition environment is not conducive to the accumulation of buried deposits.

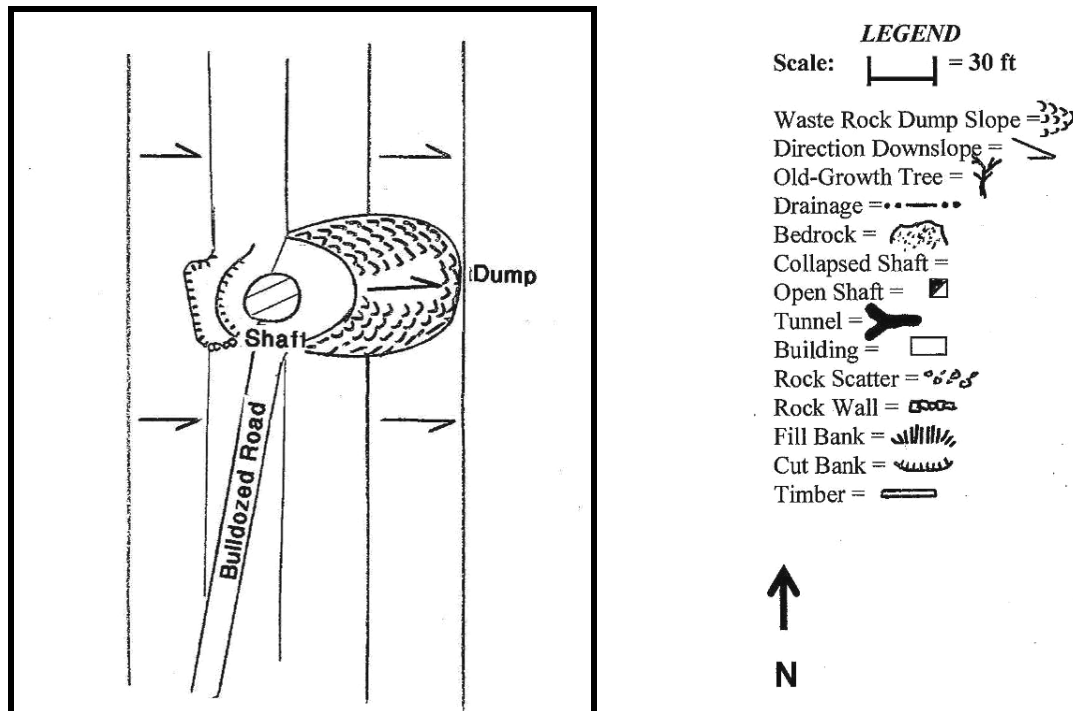


Figure 4.25: Plan view of the Mary Ella No.2, 5GL.721.

Mary Ella No.2 Mine Condition and Integrity

Invasive mine closure destroyed most of the site's historic attributes. The dump's upper half was bulldozed into the shaft, reducing its height and changing its appearance. The dump no longer possesses original surfaces or profile. Most of the shaft house platform was sliced away and features representing the hoisting system were destroyed, leaving only a narrow section stranded on the mountainside. The shaft itself is now a crater with concrete panels at the bottom.

The resource possesses no integrity. With most historic elements gone, the site lacks integrity of design, materials, workmanship, feeling, and association. The setting is intact.

Mary Ella No.2 Mine Significance

The site lacks significance. Isolated high on Maryland Mountain's east side, the site is invisible from most vantage points around Black Hawk and has no neighboring resources. The site also lacks integrity and is thus ineligible for individual designation.

Mary Ella No.2 Mine Management Recommendations

No action recommended.

Mary Ella No.2 Mine Heritage Tourism Potential: None

No potential.

Site 5GL.722 Greenside Prospect Shaft
Project: Land Disposal

The Greenside was little more than a shallow prospect shaft on Maryland Mountain's south base. Prospectors sank the shaft on a fairly steep, southwest-facing slope featuring small granite outcrops. The area is overgrown with a second-growth ponderosa pine forest and understory of Gambel oak brush. Elevation is 8,400', and the Gilpin Tramway railroad grade is located immediately above and to the north, while Chase Gulch floor is a short distance below and southwest. Historically, prospectors accessed the shaft via a road descending a short distance southeast to the Centennial Extension Mine (5GL.723). The shaft and dump themselves are on Black Hawk open space, but the access road crosses a narrow BLM land tract.

In 1996, DRMS registered the site for a closure project but did not actually document any of its attributes. Despite the lack of information, DRMS recommended the site ineligible and OAHPC concurred. DRMS did not alter the shaft in any way because it had already slumped closed.

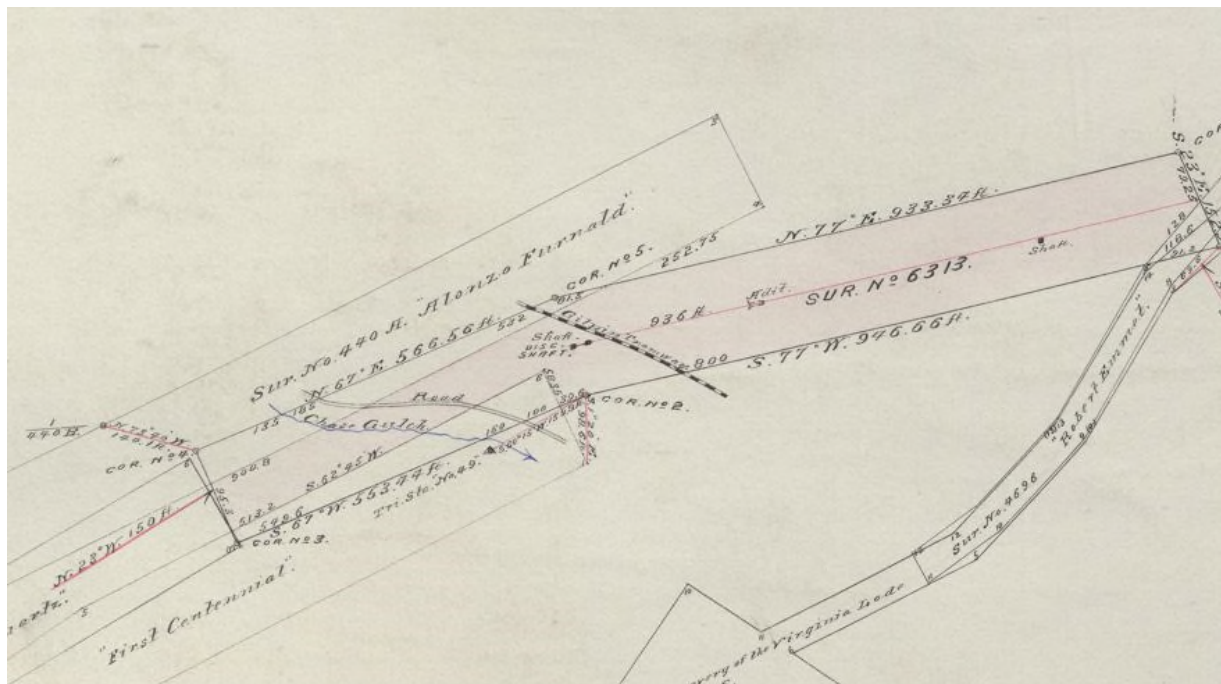


Figure 4.26: The 1890 survey plat depicts the Greenside prospect shaft, marked at center. The Gilpin Tramway railroad passes along the upper right side. The floor of Chase Gulch, and the area's main artery road, is below and left. Source: *Mineral Claim Survey Plat*, BLM.

Greenside Prospect Shaft History

In-depth archival research found only a few facts regarding the Greenside, leaving its full history unknown. Prospectors staked the Greenside claim over a vein by the same name trending northeast-southwest during the 1870s or 1880s. Their prospect shaft and a separate prospect cut proved that the vein offered a thin stringer of gold ore, and eventually Central City mine operator Frederick Kruse purchased the property. Kruse, however, did little with the Greenside except for patenting it in 1890.

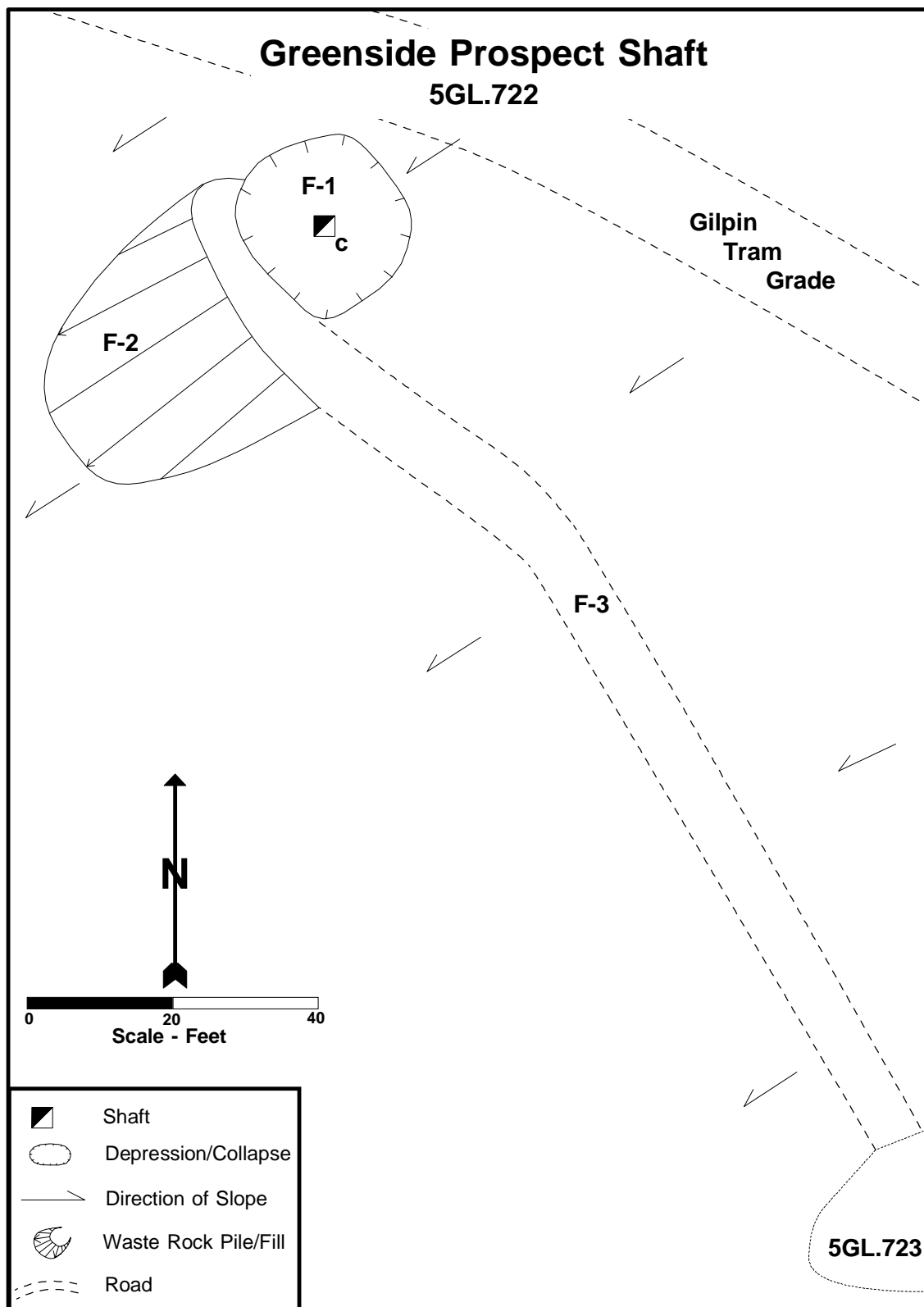


Figure 4.27: Plan view of Greenside Prospect Shaft, 5GL.722.

The shaft and cut were abandoned, but the vein attracted the interest of the Hoosier Leasing Company in 1921. The firm operated the extensive Bonanza Tunnel, whose portal and surface plant were sited near the mouth of Chase Gulch. The tunnel was originally driven north into Maryland Mountain during the early 1880s to undercut a series of veins so they could be worked from the bottom up. Most of the veins had been long exhausted by 1921 when Hoosier leased the property, so the firm drove a crosscut passage from deep within the tunnel over to the Greenside, hoping it offered ore at depth. It did, and Hoosier worked the Greenside deep underground for several years. The old prospect shaft above saw no associated activity. The Greenside Vein proved better than expected, yielding good ore into 1926.²⁰

Greenside Prospect Shaft Description

As a historic resource, the Greenside Prospect Shaft is very basic. At one time, the Greenside featured a small shaft (F1) supported by cribbing, in a shaft house standing on a pad of waste rock (F2). A well-made wagon road (F3) descended 130' southeast to the Centennial Extension Mine.

The cribbing eventually imploded and the shaft became a subsidence crater 22'x24' in area and 4' deep. The subsidence drew in the waste rock dump's top-surface and nearly all evidence of the shaft house. Presently, a rock alignment 8' long extends across the crater's south side, which was probably a footer for the building. The alignment is, however, insufficiently preserved for definite interpretation. The shaft has no integrity as a historic feature, and saplings now grow in the subsidence.

The waste rock dump is a fan of material 31'x38' in area and 4' thick, with southeast top-surface flattened for workspace. The road featured a bed 8' wide graded with cut-and-fill methods, the fill having been poured over rubble and rocks to hold it in place. Some segments were also retained with a dry-laid rock wall 2' high, which remains mostly intact. The bed is now blanketed with soil, erosional deposits, and vegetation.

The site offers only a handful of cut nails as an artifact assemblage. Buried deposits are absent because activity was too brief to generate material in volume.

Greenside Prospect Shaft Interpretation

The Greenside was a typical short-lived prospect shaft. The small waste rock dump indicates that the shaft was less than 100' deep and featured very short exploratory drifts underground. The shallow shaft required no mechanized hoist; a traditional hand windlass being sufficient. As was common, a small shaft house enclosed the shaft collar and small area for sorting through ore samples. The building could also have enclosed a simple blacksmith forge and anvil, although evidence of blacksmithing is absent. The shaft failed to produce ore in meaningful tonnages, and the site thus lacked an ore bin. The well-graded road is a curious feature, as prospect shafts usually did not justify this. The owner may have graded the road as an improvement to hold title to the claim prior to patent, or to make the property more attractive for sale.

The shaft's timeframe is difficult to determine because both archival information and material evidence are incomplete. Temporal artifacts are limited to a few cut nails, which date from before 1890.

²⁰ Colorado Mine Inspection Reports: Bonanza Tunnel, Greenside; *Mineral Claim Survey Plat: Greenside*.

Greenside Prospect Shaft Condition and Integrity

The Greenside is in poor condition. When the site was intact, the most important features surrounded the shaft, including the shaft house platform and any attributes within. The shaft imploded and drew in the platform, destroying its entire footprint, other small-scale features, and artifacts. The site now appears as little more than a crater surrounded by a waste rock mound, with a faint road descending southeast. Although young ponderosa pines are overtaking the site, the dump is highly visible from the Gilpin Tramway railroad grade and Chase Gulch Road on the gulch floor below.

The site has impaired integrity. Without buildings, structures, or meaningful feature and artifact assemblages, the site lacks integrity of design, materials, workmanship, and association. But, when standing on the dump, the site possesses some feeling of prospecting. The setting is excellent.

Greenside Prospect Shaft Significance

The Greenside is significant as a contributing element of the landscape. The waste rock dump is plainly visible from the Gilpin Tramway grade above the site, and from Chase Gulch Road on the gulch floor below. In a setting of ponderosa pine forest and nearby mines, the dump contributes a feeling of prospecting to the landscape.

The site is recommended individually ineligible because integrity is insufficient. Regarding Criterion A, the Greenside was a short-lived, unproductive, and unimportant prospect. Archival research was unable to establish a physical link between the Greenside and important people, nullifying Criterion B. Under Criterion C, the site is not a good example of its resource type, a prospect shaft, because integrity is poor. The site also will not yield meaningful information upon further study because it lacks buried deposits, complex feature systems, or a rich artifact assemblage.

Greenside Prospect Shaft Management Recommendations

In terms of Section 106, the Greenside is a contributing element of the landscape, and its access road crosses a narrow BLM land tract. Transfer of the tract from the federal domain to local government could adversely affect the landscape. With a finding of adverse effect, mitigation may be required.

Greenside Prospect Shaft Heritage Tourism Potential: None

The site has no tourism potential.

Site 5GL.723 Centennial Extension Mine
Project: Basic Inventory

In 1875, a prospecting party discovered the First Centennial Vein system on Winnebago Hill's north slope, claiming it as the First Centennial. Understanding that the vein system trended northeast, another party traced it over to the opposite, northeast side of Chase Gulch and claimed the new segment as the Centennial Extension. The prospectors sank several shafts to extract rich gold ore, focusing on one main entry near the gulch floor for deeper work. Eastern investors leased the property in 1897, renamed it the East Centennial, installed a steam hoist, and deepened the main shaft. The mine produced through 1903. The main shaft is now an archaeological resource offering only two features with no evidence of the hoisting system, buildings, or structures. The resource is located on present-day Chase Gulch Road's northeast side, opposite the Centennial Tunnel (Site 5GL.2206), amid bedrock cliffs and outcrops.

DRMS registered but did not properly record the site for a closure project in 1996. With no supporting information, DRMS recommended the site ineligible and OAHPC concurred. The shaft was then closed by pushing in waste rock and installing concrete panels. Archaeological features representing the shaft house, hoist, and other facilities were destroyed in the process. Despite this, the waste rock dump is still a prominent element of the landscape.

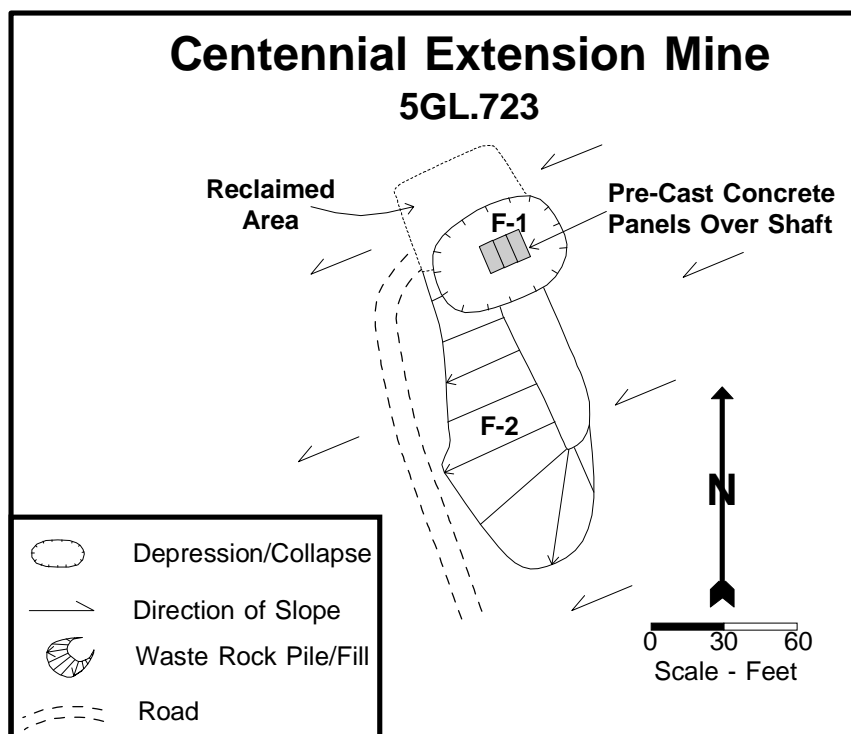


Figure 4.28: Plan view of Centennial Extension Mine, 5GL.723.

Centennial Extension Mine Description

The feature assemblage is limited to the shaft itself, a substantial waste rock dump, and little else. The shaft imploded decades ago, creating an ovoid funnel 12' x 18' in area that drew in

the waste rock dump's central portion. In 1992, DRMS capped the opening by bulldozing in more waste rock and installing concrete panels. Lacking original form, the shaft now manifests as a crater 40'x56' in area with the panels at bottom. The waste rock dump is a pad of material approximately 68'x150' in area and 12' thick extending southeast. DRMS scraped the top-surface when it closed the shaft, erasing any small-scale features that may have survived the shaft's initial collapse. The dump no longer retains its historic surface, but does feature an original footprint and profile.

The site's artifact assemblage is impoverished, nearly all structural materials and large items having been removed long ago. Many artifacts were also pushed into the shaft during closure. Even so, a few cut nails, blacksmith shop refuse, boiler clinker, and amethyst bottle glass are scattered on the dump's intact portion. Cut nails reflect an age range spanning the 1870s and 1880s. Buried archaeological deposits are unlikely because activity on-site tended not to generate material in volume, which was thrown out onto the ground. Further, the deposition environment of steep slopes and thin soil is not conducive to the accumulation of buried deposits.

Centennial Extension Mine Condition and Integrity

In condition, the resource is poorly preserved. The shaft collar imploded decades ago, and DRMS bulldozed in waste rock and capped the opening with concrete panels in 1996. The closure destroyed any small-scale features that may have survived the initial collapse, as well as scraping off the waste rock dump's top-surface. The site now appears as a crater and dump. Without an archaeological feature assemblage, the resource lacks integrity of design, materials, workmanship, feeling, and association. The site does, however, possess integrity of setting.

Centennial Extension Mine Significance

The site's principal significance is as a contributing element of the historic landscape. The dump is a prominent landmark on Chase Gulch Road, enhanced by its distinct, light-gray appearance. Further, the Centennial Extension is one in a cluster of other substantial mines in the gulch, and its dump compliments the other sites.

Centennial Extension Mine Management Recommendations

Several actions are suggested for planning and heritage tourism development.

- Interpretive sign on Gilpin Tramway overlook, above site.
- Archival research to provide interpretive information.

Centennial Extension Mine Heritage Tourism Potential: Medium

The site is a prominent landmark on the Gilpin Tramway bed. In combination, the tram bed, rock walls, collapsed shafts, and substantial dumps create an interesting microenvironment.

Interpretive Sign. A simple sign can identify the site's name and brief history.

Site 5GL.724 Virginia Shaft
Project: Land Disposal

The Virginia Shaft was important as one of Black Hawk's earliest and longest-lived gold producers. Prospectors discovered the Virginia Vein in 1859, and various mining outfits worked it intermittently until around 1910. The shaft was sunk in a minor gully on Winnebago Hill's northeast flank, at around 8,480' elevation. The slope is extremely steep, northeast-facing, and presently overgrown with thick doghair fir and aspen forest. The site is an archaeological resource composed of foundations, a shaft house platform, and a partially intact steam boiler.

In 1996, DRMS included the Virginia in an extensive closure project, registering but not recording the site. With no supporting information, DRMS recommended the site ineligible and OAHP concurred. By that time, the shaft had already collapsed and became a massive funnel that drew in the shaft house platform's southeastern portion. DRMS closed the funnel by bulldozing in more of the platform, surrounding ground, and some waste rock, and installing concrete panels. The bulldozing destroyed the site's critical features except for the boiler. The site's southeastern tip extends onto BLM land.

Virginia Shaft History

In 1859, prospectors experienced with hardrock veins searched the northeast flank of Winnebago Hill for ore and unearthed the Virginia Vein. As was common, they sank a shallow shaft to prove the presence of gold and were successful. The shaft yielded ore for a short time, but with depth, the material deteriorated in quality and richness, proving difficult to treat in the area's simple stamp mills. The Virginia was then abandoned as unworkable and forgotten until the 1870s.²¹

Experienced Central City mine operator Hal Sayr became aware of the Virginia's history, understanding that work had ceased when the easily processed ore was exhausted. But a treasure trove of complex ore had been left in place, awaiting improvement in milling technology. The time was at hand, and Sayr began minor development around 1875. The workings were limited to the original, shallow shafts and a cut. After clearly proving the vein's potential, Sayr sold the property to another operator, Harper M. Orahood, who added the Virginia to his growing portfolio of mines in 1878. Orahood did not invest in the systematic development that the vein needed, instead leasing it out to Blake & Company while focusing on better properties. Blake extracted the available ore over the course of three years until it was gone, and unwilling to invest in uncertain development, moved on. Orahood may have leased the Virginia again, but the property saw little activity for at least a decade.²²

Orahood revived his interest in the property during the late 1890s. He hired B.J. Smith as manager, who planned to develop the vein as it should have been all along. Smith installed a 50 horsepower friction hoist and 80 horsepower Hendrie & Bolthoff boiler in a substantial shaft house, and deepened the shaft to 350'. Miners then properly developed the vein with around 1,000' of drifts. With blocks of ore ready to extract, Orahood leased the mine again, this time to Chicago investors who organized the Crockett Mining Company. They retained Smith as manager, and he in turn took on William Couch as superintendent. Crockett extracted all the ore that Orahood blocked out and sank the shaft to 500' in search of more. The Virginia was a

²¹ Wickersheim and LeBaron, 2005:221.

²² *Mineral Claim Survey Plat: Virginia; Rocky Mountain News* 10/29/81 p2 c3; Wickersheim and LeBaron, 2005:221.

regular producer until 1907, when Crockett determined the best ore was gone. Crockett pulled out, and with no operator, Orahoad allowed the shaft to flood.²³

Central City miner B. Barnard suspected that the Crockett Mining Company had not been thorough in its development and exploration, postulating that the mine's depths still offered stringers of rich ore. He tested his idea in 1908, paying to unwater the shaft and clean out some of the deeper workings. But Barnard was wrong, finding that the existing ore was too low in grade to support further operations. He abandoned work after a short time and allowed the shaft to permanently flood.²⁴

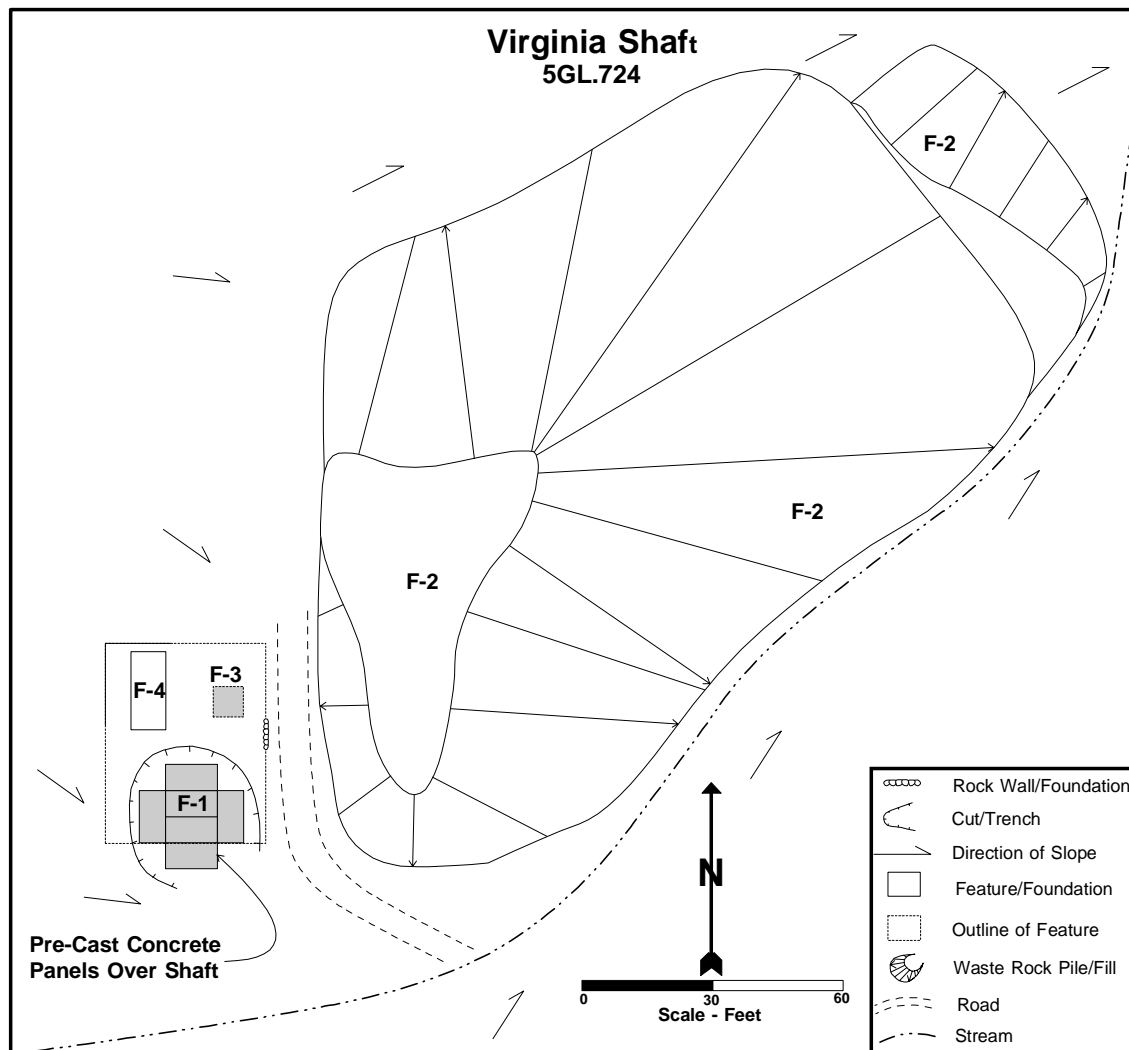


Figure 4.29: Plan view of the Virginia Shaft, 5GL.724.

²³ Callbreath, 1899; Colorado Mine Inspection Report: Virginia; *Denver Times* 4/18/1900 p10 c2; "Mining News" *EMJ* 7/7/1900 p18; *Mineral Resources*, 1907:256; *Rocky Mountain News* 12/2/99 p3 c3.

²⁴ "Mining News" *EMJ* 3/28/08 p671.

Virginia Shaft Description

The Virginia Shaft has been reduced to a poorly preserved group of archaeological features. The shaft (F1) was originally 5'x10' in the clear and dipped southeast in sympathy with the Virginia Vein. The collar collapsed after abandonment and became a funnel around 30' in diameter. DRMS capped it with concrete panels in 1996, digging out a 40' diameter area to expose bedrock for footing. The shaft has no integrity.

With ore cars on a track, miners dumped waste rock (F2) downslope and northeast, grading the top-surface flat as they went. Over time, they built up a pad 145'x180' in area and 18' thick. Much of the pad's southwestern portion is now gone, some having slumped into the shaft, a little more being bulldozed in by DRMS, and most being washed away by runoff.

A frame shaft house enclosed the hoisting system, steam boiler, and blacksmith shop. The building stood on a pad of waste rock fill (F3) originally 37'x46' in plan, with the shaft in the south end and facilities in the north end. Collapse of the shaft drew in the southern portion, and DRMS wrecked the northern when it closed the shaft. The platform's northwest corner is discernable but the rest is difficult to interpret. The mine's hoist was a single-drum steam model anchored to bolts (F4) in the shaft house's north corner. Much of the foundation was destroyed when DRMS closed the shaft, leaving three of the bolts. Their pattern suggests that the hoist was 7'x7' in plan. Reflecting archival information, a Hendrie & Bolthoff return-tube boiler (F5) powered the mine machinery. As was typical, the steam generator consisted of an iron shell over a brick setting with a cast iron half-façade. The shell is 4½' in diameter and 13½' long, and the façade 7½' wide, 17' long, and 7' high, with the boiler suspended from both buck staves and brackets. The shell is intact but missing its doors and small fittings.

A representative artifact assemblage seems to have survived the disruption caused by shaft collapse, the bulldozing, and flashflooding in the gully. Structural debris, some industrial refuse, hand-finished bottle fragments, and a food pail are scattered on the waste rock dump and shaft house platform. Most of the industrial refuse is blacksmithing debris, boiler hardware, and pipe segments and fittings. The site lacks buried archaeological deposits. Privy pits could not be identified, and extremely steep slopes and a gully prone to storm runoff provide a poor deposition environment.

Virginia Shaft Interpretation

The Virginia is characteristic of many of Gilpin County's shaft mines. The Virginia Vein was discovered early, worked briefly on a small scale until the easily treated ore was gone, and then purchased by knowledgeable, local investors Hal Sayr followed by Harper Orahood. The vein was not seriously developed until the late 1890s, probably because Orahood was closely managing his better mines. Orahood realized the Virginia was wasted capital, and improved it for lease. The Virginia then took the same general form as most other shaft mines.

A frame shaft house enclosed the machinery, a blacksmith shop, and ore sorting station. The hoisting system was a light-duty production-class assemblage, the hoist being a 7'x7' steam unit and the single boiler an 80 horsepower return-tube model. The boiler generated enough steam for both the hoist and a pump in the shaft. Overall, the surface plant represents a moderate capital investment capable of generating ore in limited tonnages. The underground workings were extensive, confirmed by both archival sources and the substantial waste rock dump.

Virginia Shaft Condition and Integrity

Mine closure and natural deterioration left the site in very poor condition. The shaft collapsed and became a broad funnel, which DRMS then enlarged and capped with concrete panels. DRMS also bulldozed a berm around the funnel to deflect storm runoff washing down the area's gully. The collapse and closure destroyed the site's southern and most important portion where a majority of small-scale features were located. Included were most of the shaft house platform, surrounding ground, and waste rock dump's southwestern flank. Numerous tires and small pieces of rubbish migrated down to the site from a circa 1980s landfill above, and young aspens are overtaking the site's margins.

Despite this, the site possesses two important qualities. Nearly all the waste rock dump still has its original footprint, profile, and surfaces, appearing similar today to when the mine operated. The closure avoided the Hendrie & Bolthoff boiler installed during the late 1890s. The appliance is a good example of its type, featuring the iron shell, cast iron façade, and masonry setting. The boiler is the only intact one of its kind in the entire landscape.

When considered alone, the boiler possesses good integrity. Although missing a few small parts, it is sufficiently intact to embody design, materials, workmanship, and association. The Virginia Shaft site and greater mining landscape are a good setting.

The remainder of the Virginia Shaft site, however, has poor integrity. Without an intact feature assemblage, the site does not convey design, materials, or workmanship. Even with the disturbance, the site does offer some feeling and association.

Virginia Shaft Significance

The Virginia Shaft is significant as one of the landscape's most prominent elements. The waste rock dump is a large-scale historic feature visible from numerous vantage points in the area. The boiler lends small-scale engineering detail when the site is examined more closely. Further, they compliment other visually prominent resources in central Chase Gulch including the adjacent Virginia Mine Road (5GL.2173), Queen of the West Mine (5GL.301), Queen of the West Tunnel (5GL.2172), and Gilpin Tramway (5GL.2104.1).

Individually, the Virginia Shaft is recommended ineligible for the NRHP because integrity is insufficient. Under Criterion A, the shaft was important for its early discovery (1859) and long-term gold production and employment 1877-1908. But, the site no longer embodies these trends. In terms of Criterion C, the site is not a good example of its resource type, a shaft mine. Shaft collapse and subsequent closure destroyed most features. The site also will not yield important information upon further study because it lacks buried deposits, complex feature systems, or a rich surface artifact assemblage.

The site is, however, recommended eligible under SRHP Criterion C for its boiler. In general, intact machinery is rare in the Central City Mining District, and the Virginia's boiler is an important if not well-preserved surviving example.

Virginia Shaft Management Recommendations

In terms of Section 106 compliance, the site is a critical landscape feature, and its southeastern corner lies on BLM tract. The tract's transfer out federal domain will be an adverse effect to the landscape. Mitigation may be required.

A few voluntary actions are recommended for interpretation and heritage tourism planning.

- Additional archival research to provide more information for interpretation.
- Interpretive signage explaining site history.
- Include site on a connector trail from Chase Gulch Road, up Virginia Mine Road, through Virginia Shaft, to Gilpin Tramway above.

Virginia Shaft Heritage Tourism Potential: High

The Virginia Shaft has high potential because of its importance and prominent location on Winnebago Hill, between Chase Gulch Road and the Gilpin Tramway railroad grade.

Interpretive Signage. Interpretive signage at the site can explain the shaft's history.

Connector Trail. The Virginia Mine Road can be readily adapted into a trail by thinning saplings. The road can serve as a connector from Chase Gulch Road, through the Virginia Shaft site, and up to the Gilpin Tramway. The Virginia Shaft site can be interpreted with signage.

Site 5GL.725 Sarah E. Mine **Project: Basic Inventory**

The Sarah E. Mine consisted of an open stope, shallow shaft, and a tunnel driven downslope to intersect the workings at depth. The site lies on Maryland Mountain's southwest flank. DRMS registered but did not actually record the site for a closure project in 1996 and recommended it ineligible. The site possessed high integrity at the time, featuring an intact shop, explosives magazine, and archaeological features. URS Corporation reevaluated the site in 2005 for a land disposal and successfully reversed the determination to eligible. URS, however, did not adequately record the site nor completed necessary archival research. URS documented the tunnel but ignored the shaft and stope upslope.

The site was included in the 2014 Basic Inventory because it is eligible and a landscape icon. The site was, however, not rerecorded because existing documentation is sufficient for project purposes.

Sarah E. Mine Description

The Sarah E. Mine began as a simple shaft sunk on a claim by the same name, probably during the 1880s. Later, miners undercut the vein with a tunnel, abandoned it, and reopened the tunnel during the 1930s. The tunnel is presently intact, the shop and magazine still stand, and the

associated archaeological features are preserved. The shop interior also has important small-scale features such as blacksmith forges. The waste rock dump possesses its original footprint and profile, but its surface was scraped by a bulldozer decades ago.

The artifact assemblage is impoverished, limited to structural debris and shop refuse around the shop building.

Sarah E. Mine Condition and Integrity

The Sarah E. is fairly well preserved. The tunnel portal is intact, but the shaft and stope upslope have collapsed. The shop is standing but dilapidated with leaking roof and missing windows. The magazine is deteriorated. Some of the site's archaeological features are distinct while others are overgrown and difficult to discern.

The site retains sound integrity. Combined, the buildings and archaeological features convey design of the last-generation surface facilities. Individually, the shop and magazine also have integrity of design, materials, and workmanship. Overall, the site possesses feeling of mining and lies in an intact setting.

Sarah E. Mine Significance

The Sarah E. Mine is significant in two areas. First, it is a prominent landscape icon with waste rock dump and shop building visible from numerous vantage points.

Second, the site is eligible for the NRHP and SRHP under Criterion C because it is not only a good example of its resource type, a tunnel mine, but also offers period architecture.

Sarah E. Mine Management Recommendations

- Intensive site documentation and research. URS did not fully record the site in 2005, and conducted no archival research. The data gaps should be filled.
- Stabilize the shop building using compatible materials. Clean out interior. Improve upslope drainage. New foundation and salvaged corrugated sheet iron for roof, and tighten or repair wall framing. New windows and custom plank door. Install workbench, rebuild forge, install anvil block.
- Thin vegetation around shop and on dump. Stumps to grade
- Interpretive signs explaining site history, role of blacksmithing, how blacksmithing was done.

Sarah E. Mine Heritage Tourism Potential: High

Interpretive Signage. The site has high interpretive and education potential. The shop is a good example of mining architecture and can illustrate blacksmithing and its fundamental role. Emphasize mining at Black Hawk during the Great Depression, new information rarely discussed through interpretation.

Interpretive Trail. The site is a natural destination on a proposed trail. The route follows the existing road leading from Quartz Valley up to the mine.

Site 5GL.728 Queen's County Mine
Project: Basic Inventory

The Queen's County Mine lies on Maryland Mountain's east base, a short distance above the North Fork of Clear Creek. In 1996, DRMS included the mine in a closure project and registered it with OAHP as 5GL.728. The site was included in the 2014 Basic Inventory because it is substantial enough for landscape and National Register district consideration. The site was quickly field-checked for the inventory but not recorded due to time constraints. A plan view and photographs are unavailable.

Queen's County Mine Description

The Queen's County Vein was initially developed through a series of shallow shafts during the 1870s and then undercut by the Midas Tunnel (5GL.739) during the early 1880s. The vein was then worked through the tunnel for several years. Most of the shafts had collapsed by the 1990s except for an open stope. DRMS then closed the stope and possibly affected associated features representing surface facilities.

DRMS registered the site with OAHP prior to closure but did not actually document physical remnants. Missing from site forms are a plan view, feature descriptions, artifact inventory, archival research, and site description. No qualitative information exists.

Queen's County Mine Condition and Integrity

A full statement of condition and integrity cannot be provided here because the site was not recorded for the Basic Inventory. According to brief field examination, the site's features are in poor condition, all shafts having collapsed except for an open stope, which was backfilled. The feature assemblage representing surface facilities was sparse prior to closure, and almost nothing presently remains.

The site possesses poor integrity due to natural decay and closure. Without an intact archaeological feature assemblage, the resource lacks integrity of design, materials, workmanship, and association. The site does, however, possess integrity of feeling and setting.

Queen's County Mine Significance

The site's principal significance is as a contributing element of the historic landscape. Although small, the waste rock dumps are prominent landmarks on Maryland Mountain's flank, clearly visible from Highway 119. Further, the site is one in a cluster of other mines on the mountainside, and its dump compliments the other sites. DRMS registered but did not actually document the site for its 1996 closure project. OAHP determined the site ineligible despite the lack of supporting information.

Queen's County Mine Management Recommendations and Heritage Tourism Potential

No potential, and no action recommended.

Site 5GL.730 Josephine Mine
Project: Basic Inventory

The Josephine Mine featured a main tunnel on the Josephine Vein, at the east base of Maryland Mountain in North Fork of Clear Creek canyon. The Brack Hollow Tunnel (5GL.2216) is adjacent and north, and the Midas Tunnel (5GL.739) is farther north. The three form a collective visible from Highway 119, on the canyon's east side. DRMS registered but did not actually record the site for a closure project in 1996. The site was determined to be ineligible despite the lack of supporting information.

Josephine Mine Description

Historically, miners bored the Josephine tunnel southwest along the Josephine Vein and dumped waste rock downslope, building up a large pad of material at the portal. In 1887, the Gilpin Tramway railroad was graded across the dump's surface directly in front of the tunnel. The mine's blacksmith shop stood somewhere nearby.

The site is presently a simple archaeological example of its resource type, a tunnel mine. All buildings, structures, and equipment were removed long ago, leaving the tunnel, dump, and tram grade. The tunnel is located at the end of a trench 8' wide and 20' long, the portal having been bulkheaded by DRMS in 1996. A monument in the bulkhead is stamped with P42 Project 234. The dump is a pad 92'x116' in area and 6' thick with top-surface a leveled space 36'x66' in area. The dump possesses its original surfaces, profile, and footprint.

Only a handful of artifacts remain at the site, including cut nails and blacksmithing refuse scattered on the dump. The nails reflect an age range spanning the 1870s-1880s. Buried archaeological deposits are absent.

Josephine Mine Condition and Integrity

The resource is well-preserved but simple. DRMS bulkheaded the tunnel in 1996, causing no disturbance. The tunnel and access trench are partially blocked by slumped earth but they, the dump, and tram grade are all generally intact on an archaeological level. The site lacks features representing surface facilities such as a blacksmith shop platform or ore bin foundation. The dump possesses original surfaces, footprint, and profile.

The resource possesses mixed integrity. Without evidence of surface facilities, no conclusions can be made about design, materials, and workmanship. But, the site does have feeling and association of mining during the 1870s and 1880s. The setting is intact.

Josephine Mine Significance

The site's principal value is as a contributing element of Maryland Mountain's landscape. The dump is prominent and visible from Highway 119, on the east side of the North Fork canyon. This site, combined with the Brack Hollow Tunnel and Midas Tunnel, form a collective reflecting substantial gold production north of Black Hawk. Despite the interesting interface between the railroad and tunnel, the site lacks sufficient integrity for eligibility on its own.

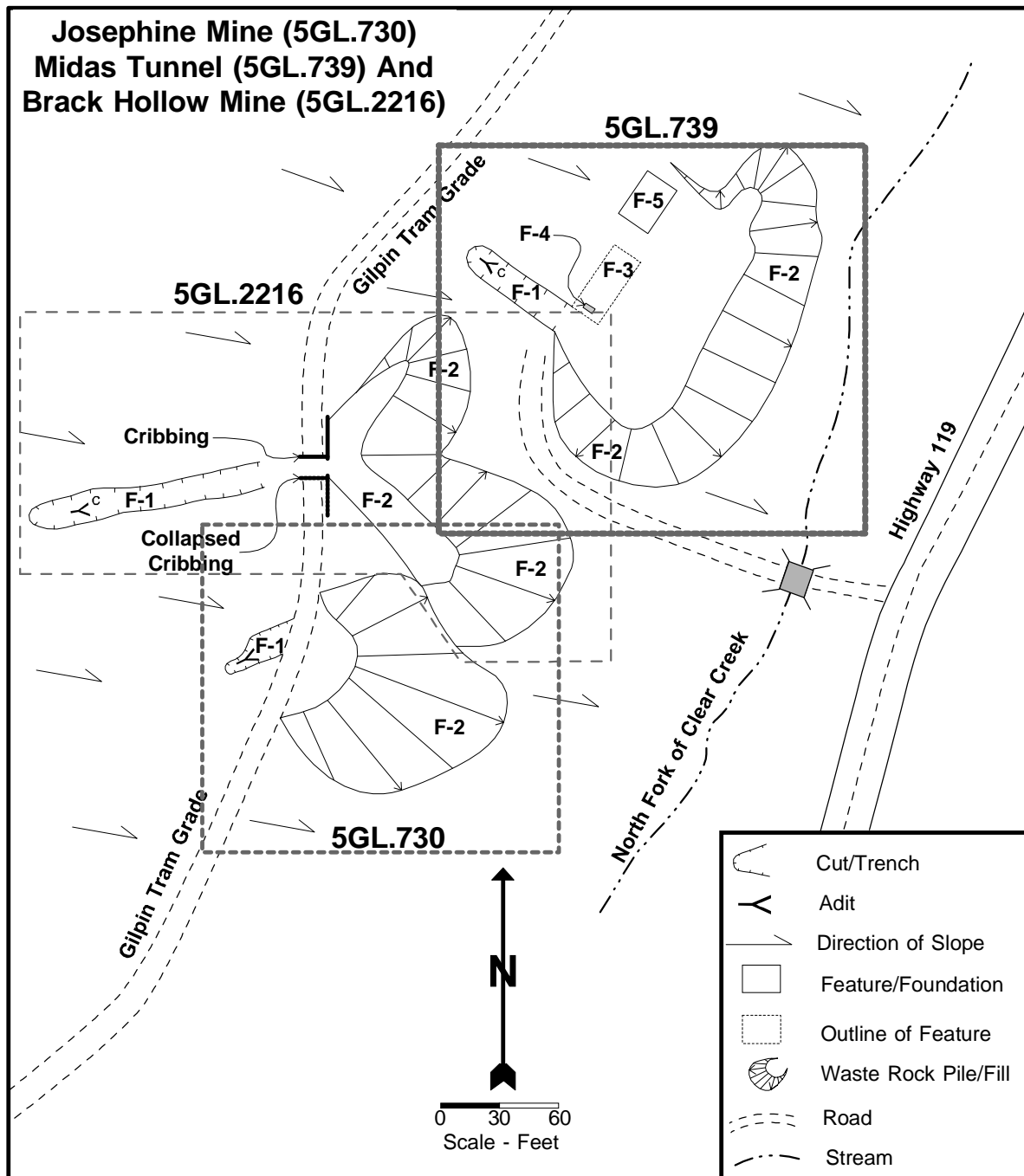


Figure 4.30: Plan view of Josephine, 5GL.730, Midas Tunnel, 5GL.739, and Brack Hollow, 5GL.2216.

Josephine Mine Management Recommendations

- Interpretive signage on Gilpin Tramway grade explaining the mine's history.

Josephine Mine Heritage Tourism Potential: High

The site's potential is high because of its visual prominence and location on the Gilpin Tramway grade.

Interpret Site. A simple sign posted on the tram grade can simultaneously identify the adjacent Brack Hollow Tunnel (5GL.2216) and Josephine Mine (5GL.730), and mention a few facts about their history.

Site 5GL.732 Ninety-Four Mine ***Project: Basic Inventory***

The Ninety Four Mine was a tunnel operation on Maryland Mountain's east base, a short distance above the North Fork of Clear Creek. In 1996, DRMS included the mine in a closure project and registered it with OAHP as 5GL.732. The site was included in the 2014 Basic Inventory because it is substantial enough for landscape and National Register district consideration. The site was quickly field-checked for the inventory but not recorded due to time constraints. A plan view and photographs are unavailable.

Ninety-Four Mine Description

The site includes a grated tunnel and small waste rock dump without clear evidence of associated surface facilities. DRMS registered the site with OAHP prior to closure but did not actually document physical remnants. Missing from site forms are a plan view, feature descriptions, artifact inventory, archival research, and site description. No qualitative information exists, and the site's original content remains unknown. It can be observed that today, the site only vaguely resembles a tunnel mine because the tunnel and dump are small, overgrown, and difficult to perceive.

Ninety-Four Mine Condition and Integrity

A full statement of condition and integrity cannot be provided here because the site was not recorded for the Basic Inventory. According to brief field examination, the site's features are in poor condition. The tunnel was plugged with a grate and most of the waste rock dump is gone. The feature assemblage representing surface facilities was sparse prior to closure, and almost nothing presently remains.

The site possesses poor integrity due to natural decay and closure. Without intact features, the resource lacks integrity in all areas except for setting.

Ninety-Four Mine Significance

The Ninety Four does not contribute to the landscape because the site is almost invisible, being overgrown and difficult to perceive. The site is also individually ineligible due to a lack of integrity.

Ninety-Four Mine Management Recommendations

No actions are warranted.

Ninety-Four Mine Heritage Tourism Potential: None

No potential.

Site 5GL.733 Road or Elephant Shaft ***Project: Basic Inventory***

During the 1860s or 1870s, prospectors discovered the Road or Elephant Vein crossing through both the southwest and northeast sides of Chase Gulch. The vein began somewhere underneath Winnebago Hill and trended northeast through the gulch and into Maryland Mountain. They staked the Road or Elephant claim and developed the Winnebago Hill segment via the Freedom Tunnel (5GL.2182) and the Maryland Mountain side through the Road or Elephant Shaft (5GL.733). The Freedom Tunnel was later used to work the Freedom claim, overlapping the Road or Elephant. The two sites are east of the later Bonanza Mine and Mill.

Road or Elephant Shaft Description

The Road or Elephant Shaft is presently an archaeological resource and a contributing element of the landscape. Historically, the site featured the shaft descending vertically, a tunnel driven northeast on the vein, a large waste rock dump, a tunnel house, and tracks for ore cars. All buildings, structures, and equipment were removed long ago, and the DRMS closed the shaft with invasive methods in 1996.

The shaft (F1) is presently difficult to identify. When DRMS capped the shaft, they installed a concrete plug and buried it with waste rock scraped off the dump. In its present form, the shaft consists of a low mound of rock with a concrete-filled plastic pipe monument. The tunnel (F2) apparently collapsed on its own and is a distinct semicircular subsidence zone 15' across and 30' long. Miners used ore cars to dump waste rock northwest and southeast of the openings. In so doing, they built up a bench of mineralized material (F3) approximately 100'x260' in area and 18' thick. In recent years, a property owner scraped the surface with a bulldozer and cut a small bench across the flank.

A platform and rock walls for a tunnel house (F4) surround the collapsed tunnel portal. When intact, the tunnel house was 18'x30' in plan with the same form and construction as many mine buildings in the area. The roofline had a single pitch and half the walls were well-made

masonry and the other half-frame construction. All woodwork is now gone. The masonry walls are mostly intact and around 18" thick with remnants of local mud plaster at one time painted white. Earthen mounds and remnants of rock foundations overgrown with saplings are visible on the surface. Buried archaeological features and artifacts, which may be meaningful, lie beneath.

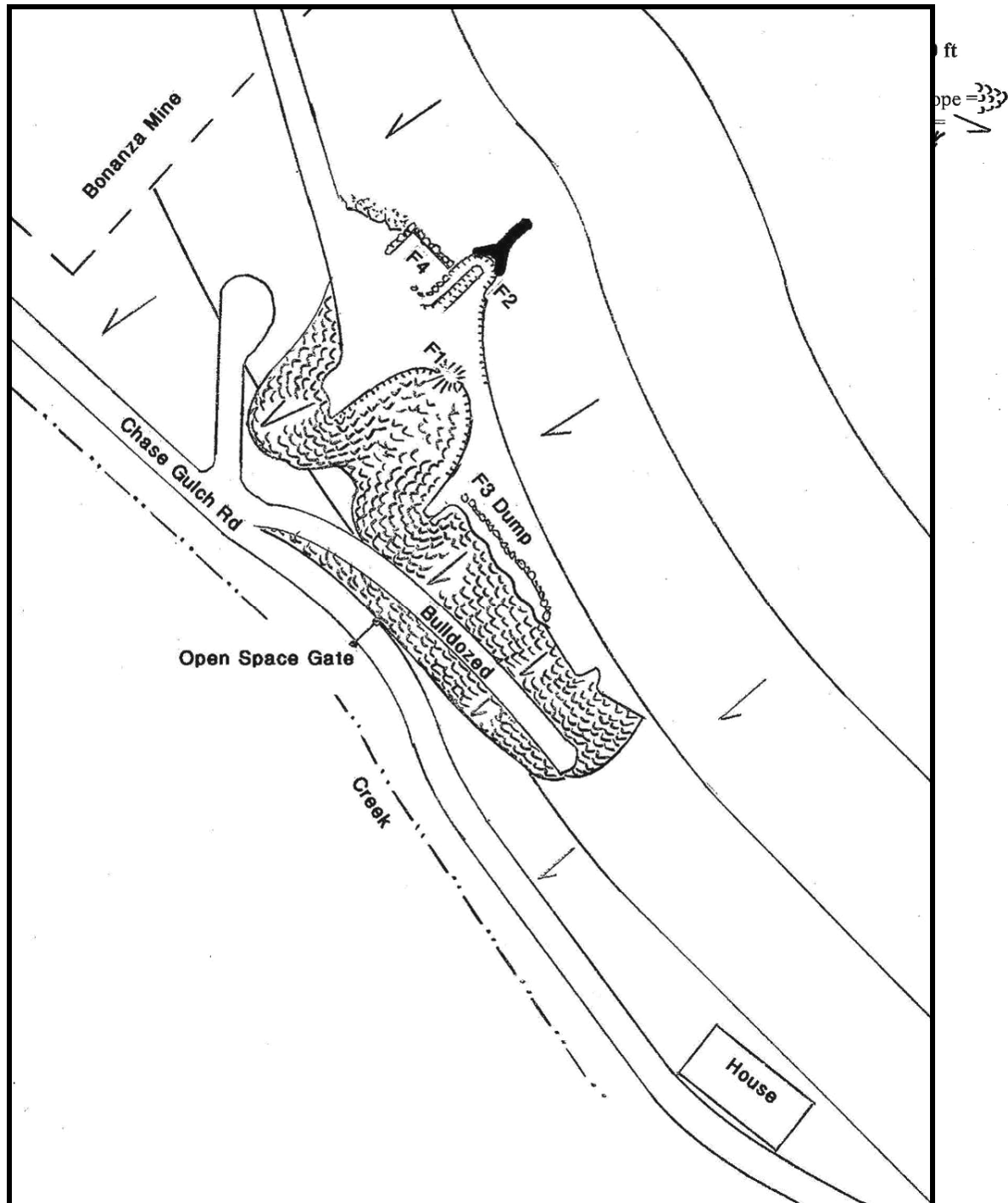


Figure 4.31: Plan view of the Road or Elephant Shaft, 5GL.733.

The site possesses a sparse assemblage of structural and industrial artifacts mostly distributed around the tunnel house platform where industrial activity was centered. Structural materials include lumber fragments, bricks, cut nails, and window glass. Industrial artifacts are limited to blacksmith shop refuse. Bottle glass is scattered around the site as well. Dateable artifacts, primarily the nails and glass, can be generalized to the 1870s and 1880s period.

Buried archaeological features and artifacts are likely underneath the earthen mounds on the tunnel house platform. Elsewhere, the deposition environment was not conducive to the accumulation of buried deposits. The features are probably remnants of shop and ore sorting facilities.

Road or Elephant Shaft Condition and Integrity

In condition, the resource is marginally preserved overall due to aggressive mine closure and property owner bulldozing. The property owner cut a road along the dump's southern flank, and DRMS bulldozed the central area into the shaft. The earthmoving disrupted the dump's original surfaces, rendered the shaft unidentifiable, and destroyed evidence of its hoisting system. The tunnel house platform is, however, preserved on an archaeological level. The platform and rock walls clearly outline the building's footprint but are becoming thickly overgrown with young aspens.

The resource possesses marginal integrity because of the bulldozing. With the shaft no longer identifiable, the dump scraped, and hoisting system features destroyed, the site has little integrity of design. The site also lacks integrity of materials and workmanship, but it does have some feeling and association relative to mining during the 1870s and 1880s. The setting is intact.

Road or Elephant Shaft Significance

The site is a Chase Gulch landmark and could be individually eligible for the SRHP. Regarding the landscape, the site marks the eastern entry into open space. The dump is large, prominent, and a component of a localized collective including the Aetna Tunnel and Shaft, Bonanza Mine and Mill, Union Tunnel, and Workers' Housing foundations. Together, these resources convey a strong sense of Black Hawk's mining industry.

The site could qualify for SRHP Criterion C because the tunnel house platform and its rock walls are a good archaeological example of Cornish influenced rock masonry buildings typical of Gilpin County. The site could also be significant under SRHP Criterion E because the shop platform apparently offers buried archaeological features that may contribute to an understanding of circa 1870s shops. The site lacks sufficient integrity for the NRHP.

Road or Elephant Shaft Management Recommendations

- Intensive documentation and archival research, necessary for interpretation.
- Interpret with signage, focusing on tunnel house ruin and its Cornish influence.
- Thin vegetation in tunnel house ruin and at tunnel portal. Stumps to grade.
- Conduct archaeological investigation of foundation mound in tunnel house ruin. Testing may reveal the structure's function.
- Archaeological investigations can be popularized for publicity.

Road or Elephant Shaft Heritage Tourism Potential: High

The site has high potential because of its accessible location adjacent to the Bonanza Mine and Mill. The tunnel house ruin is also significant. A wide, flat trail already links the site with the Bonanza.

Interpretive Signage posted at the tunnel house ruin can explain the site's history and the tunnel house, noting Cornish influence on construction.

Site 5GL.739 Midas Tunnel ***Project: Basic Inventory***

The Midas Tunnel is a good archaeological example of a tunnel mine, the resource type. The tunnel is located on Maryland Mountain's east base a short distance above the North Fork of Clear Creek. A landmark on Highway 119, the site is both a contributing element of the landscape and potentially eligible for the NRHP and SRHP on its own. See Figure 4.30 for a plan view.

DRMS registered but did not record the Midas for a closure project in 1996 under the mistaken name of Brack Hollow. Without supporting information, DRMS recommended the site ineligible and OAHF concurred. DRMS then plugged the tunnel with rubble, carefully avoiding the site's other features.

Midas Tunnel Description

The Midas Tunnel, also known as the Eida, was an important haulageway. The Midas Gold & Silver Mining Company bored the tunnel northwest into Maryland Mountain to undercut the Brack Hollow, Dallas, Margaret Glennon, and Queen's County veins in 1880. The operation had a substantial surface plant including a tunnel house with air compressor and blacksmith shop, as well as a second building, track for ore cars, and an ore bin. The company erected a mill adjacent and north to process ore. Plagued by financial setbacks and fraud, the tunnel operated intermittently into 1923.

All buildings, structures, and equipment were removed long ago, leaving an intact assemblage of archaeological features. The tunnel (F1) is collapsed but distinct. The tunnel extended underground from the end of a trench 11' wide and 50' long, which remains intact. A rock slide blocked the portal.

Using ore cars on a track, miners dumped waste rock down along the bank of Clear Creek, building up a bench (F2) of material in 108'x188' area and 18' high. They graded the top-surface flat, forming a 70'x134' workspace. Later, a road was bulldozed up the southeast flank and the top-surface lightly scraped. Disturbance was minimal and important archaeological features were avoided.

A well-defined platform and debris remains from the tunnel house (F3). The building was 16'x38' in plan with the compressor in the southwest end and shop in the northeast end. The compressor foundation (F4) is a concrete pad 3'x5½' in plan.

Another obvious platform (F5) outlines the mine's second building, which stood northeast of the tunnel house. The building was 20'x30' in plan with earthen berms serving as wall footers. The building's function is unknown at present, although it may have been a stable for draft animals working the tunnel.

The site possesses a rich artifact assemblage of structural materials and industrial refuse concentrated around the building platforms. Structural materials include lumber fragments, wire nails, selenium window glass, and sheet iron. Industrial refuse confirms blacksmithing activities, repair of machinery and drills, and the use of explosives. Dateable artifacts reflect two time periods. Amethyst glass, early machine-made bottle bases, and soldered sheet iron suggest an initial period of 1900-1910. Corrugated sheet iron, selenium glass, vent-hole cans, colorless glass carbide drums, sanitary cans with inner-rolled and soldered side-seams, and key-wind side-strip coffee cans reflect a second period during the 1930s.

Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto ground-surface. Further, the deposition environment of steep slopes is not conducive to the accumulation of buried deposits.

Midas Tunnel Condition and Integrity

The resource is fairly well preserved on an archaeological level. The tunnel portal collapsed and the waste rock dump was lightly scraped with a bulldozer, but important features representing the surface plant survived. The building platforms, compressor foundation, and artifact assemblage are distinct and readily identifiable. The site is only slightly overgrown and the dump possesses its original footprint, profile, and most surfaces.

The resource possesses good integrity on an archaeological level. The archaeological features clearly convey the general design of the mine's surface plant, but not enough remains for materials and workmanship. The site has feeling and association of mining circa 1900, and lies in an intact setting.

Midas Tunnel Significance

The Midas Tunnel is both a contributing element of Maryland Mountain's landscape and also could be individually eligible for the NRHP and SRHP. In terms of the landscape, the mine's large waste rock dump is prominent and visible from Highway 119, on the east side of the North Fork canyon. The tunnel and neighboring Brack Hollow and Josephine mines (5GL.2216 and 5GL.730) are a visual reminder that gold production extended north of Black Hawk.

The Midas could be individually eligible under NRHP and SRHP Criteria A and C in the area of Industry. The site was an important gold producer, and is a good archaeological example of its resource type, a circa 1900 tunnel mine. DRMS registered the site as 5GL.739 (misnamed Brack Hollow) for a closure project in 1996 and recommended it ineligible, which OAHF upheld. The finding should be reversed.

Midas Tunnel Management Recommendations

- Intensive documentation and archival research, necessary for interpretation and reversal of current ineligibility status.
- Reverse current ineligibility status.

- Interpret with signage explaining mine history and surface facilities.
- Thin saplings around tunnel portal and tunnel house platform. Stumps to grade.
- If site is used for trailhead parking, designate the area to the southwest. Avoid dump and surface plant area, and erect barriers defining parking space.

Midas Tunnel Heritage Tourism Potential: High

The Midas has high potential because of its prominence, importance, and easily interpretable feature assemblage. The site will also be highly accessible if the area is used as trailhead parking.

Interpretive Signage can explain the site's history, function as a deep haulage tunnel, and surface facilities. Emphasize the site as an example of a typical circa 1910 mine. Remind visitors that mining continued at Black Hawk into the 1910s.

Linear Resource 5GL.2104.1 Gilpin Tramway
Project: Land Disposal

The Gilpin Tramway was a miniature-gauge railroad dedicated to Gilpin County's mining industry. Local investors commissioned the freight carrier in 1887 and sited yards on the North Fork of Clear Creek, amid large mills north of Black Hawk. The line contoured south around Maryland Mountain, passed in and back out of Chase Gulch, wrapped around Winnebago Hill, and contoured west to Central City. A branch ascended farther west to Nevadaville and another southwest to Russell Gulch. The tramway's primary function was ore from the mines down to the Black Hawk mills, and supplies up. The North Fork to Central City line, including the Maryland Mountain and Chase Gulch sections, was the tramway's main artery. Although the track has been removed, the tram bed is well-preserved and crosses numerous BLM land fractions. Recorded as a linear resource, the bed is a prominent landscape icon used as a recreational trail, and is recommended eligible in its own right.

Gilpin Tramway History

For half of its productive period, Gilpin County relied on freight wagons for the movement of nearly everything except for people and water. The mining industry was largely a function of freight haulage. Supplies were laboriously carted up from shipping points at Black Hawk and ore flowed down to the mills located there. The exchange was both constant and costly. A number of professional drayage outfits competed for business, but their rates were as high as the mining companies could bear. Mine owners chafed because drayage fees consumed profits and even rendered otherwise good grades of ore unprofitable to produce.

In 1886, Andrew N. Rogers rallied a group of Central City district mine owners to resolve the problem. Rogers offered a solution derived from his ten years of experience building railroads in the East and Southeast. Rogers was born in 1828 in Pennsylvania, son of an early railroad contractor whose company he joined as soon as he was old enough to work. Between 1850 and 1860, Rogers worked as chief engineer for several prominent railroads. Ultimately, the

Civil War forced him to leave his last venture in the Southeast. He took a position as manager of Black Hawk's famed Bobtail Mine in 1864, turning the operation around from disorganized to a well-engineered gold producer. He stayed with the Bobtail for years and took on management of other significant mines. Rogers proposed a miniature-gauge railroad because he both had a personal stake in its cost-savings, and wanted the challenge and prestige.²⁵

The other mine owners involved in the project were Henry Bolsinger, Robert A. Campbell, Henry J. Hawley, and Bradford H. Locke. Bolsinger owned the Hubert Mine in Nevadaville, which was among the county's best producers. Campbell also owned several mines at Nevadaville and built the Public Sampling Works at Black Hawk, a large mill that bought ore from independent mines. Hawley had a stake as a mine operator and also the owner of Central City's Hawley Merchandise Company, a lucrative hardware and department store. Locke was college educated and ran the profitable Lucerne and Hard Money mines. Together, the panel organized the Gilpin Tramway Company in 1886 to build Rogers' proposed railroad. The carrier's explicit purpose was to move freight from Black Hawk to principal mines throughout the county, and to transport ore down to all the mills. Rogers and Locke specifically chose a 2' miniature gauge (2' between rails) to minimize costs and allow for the tight curves and steep grades that would be necessary. Bolsinger was president, Campbell secretary, and Locke was manager of construction and then operations.²⁶



Figure 4.32: The southwest view depicts workers grading the Gilpin Tramway along the base of Castle Rock in 1887. Source: Denver Public Library Z-3478.

Rogers and Locke personally planned the system and surveyed its route. The freight yard and engine house were located on the North Fork of Clear Creek around one mile north of Black Hawk. The main line ascended south around Maryland Mountain and wrapped northwesterly

²⁵ Hall, 1891, V.4:554; *History of Clear Creek and Boulder Valleys*, 1880:479.

²⁶ Baker, 2004:170; Ferrell, 1970:19; "Mining News" *EMJ* 8/21/86 p136.

This map illustrates the Gilpin County, Colorado, area, focusing on the Gilpin Railroad and its branches. The main features include:

- Waterways:** Clear Creek, Chosa, Concrete Branch, Quartz Hill Branch, Phoenix Burdoughs Branch, and the Gilpin Branch. Other smaller creeks like Buckeye, Gunner, Grand Central, and Depot are also shown.
- Towns and Settlements:** Central City, Nevada, Blackhawk, and various smaller towns like Buckeye, Gunner, Grand Central, and Depot. Other locations include Wheeler Mill, Brooklyn Mill, Round House and Shops, and the End of C & S Track.
- Railroads and Tramways:** The Gilpin Railroad, Gilpin Tramway, and Gilpin Branch. The map also shows the C & S Track and the Gilpin Branch.
- Geographical Features:** The Colorado River, the Gilpin Branch, and the Gilpin Branch.
- Infrastructure:** The Gilpin Railroad, Gilpin Tramway, and Gilpin Branch.

The map is oriented with North at the top. The Gilpin Railroad is shown as a solid line, while the Gilpin Branch is shown as a dashed line. The Gilpin Tramway is shown as a solid line with cross-ticks. The Gilpin Branch is shown as a dashed line. The map also shows the Colorado River, the Gilpin Branch, and the Gilpin Branch.

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Construction began in 1887 starting with the switchyards, the main line to Central City, and the track south to Black Hawk and its mills. The Black Hawk extension was actually a third rail spiked to the existing Colorado Central tracks, ensuring close and smooth transfer of freight from one carrier to the other. Spurs were graded to the Bobtail, California, Gregory, Meade, Polar Star, and Public Sampler mills, among others. Service began in 1887 as soon as the main line reached the mines, with the Meade Mill receiving the initial ore delivery. Although archival sources make no mention of this, the ore probably came from Chase Gulch, the first mines reached.²⁷

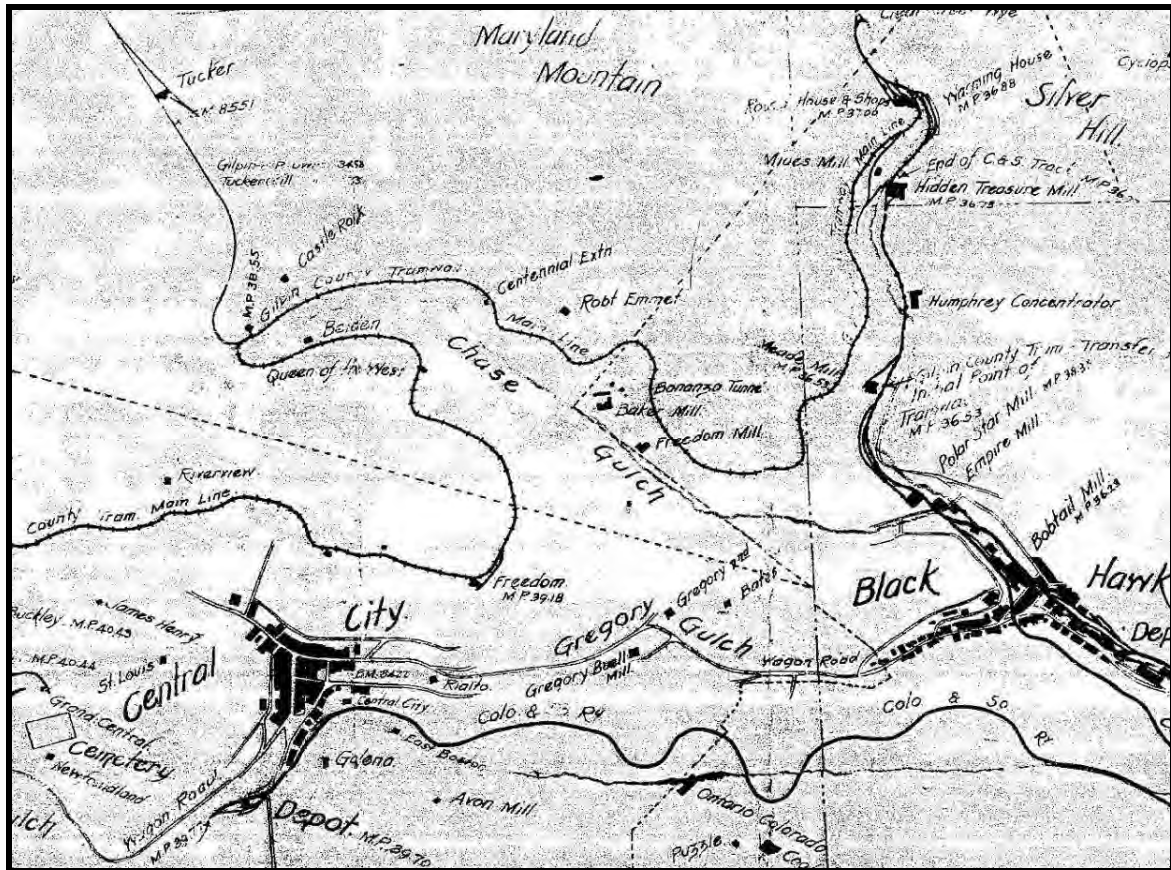


Figure 4.34: Another 1905 map details some of the mines and facilities in Chase Gulch. Source: Sketch Map, 1905.

Tracks were pushed to the most productive operations at Nevadaville in 1888, and the tramway began regular service. Its total length at that time was eight miles. The railroad hauled 150 tons of ore from the mines and returned 30 tons of supplies per day, all passing through Chase Gulch.²⁸

The track and rolling stock made the tramway unique in the West for its time. Although 2' gauge railroads existed in the East, the Gilpin system was the first of its kind in the western states. The bed was about 8' wide, and the track consisted of 35-pound rails spiked 2' apart to ties spaced every 2'. First-generation bridges crossing small creeks were assembled with timbers spiked together, spanning between rubble-filled cribbing abutments. The smaller bridges were

²⁷ Ferrell, 1970:22.

²⁸ Baker, 2004:181; Ferrell, 1970:24; "Mining News" *EMJ* 7/21/88 p50.

later replaced with stone culverts. The railroad's engines were Shay types with side driveshafts geared to drive-wheels, and most cars were steel gondolas. Although the tracks were well-designed, imperfect construction resulted in frequent derailments.²⁹

Once in full service, the tramway met expectations by enriching its directors while reducing freight rates and hence operating costs for mining companies. Some drayage outfits left the mining district altogether, while those that remained were forced to reduce their fees and scale back their fleets. And yet, the railroad did not, and never would, eliminate the need for wagons and the well-maintained roads they used. The tramway provided service only to the large mines and freight transfer points. The dozens of smaller operations still relied on wagon outfits to move ore to the railroad, and often directly to the Black Hawk mills.

In 1888, the tramway suffered a rollover of management and directors, for the worse. Frederick Kruse replaced Campbell as secretary and Joseph W. Bostwich became vice-president. Bostwich owned the Prize Mine at Nevadaville and Quartz Hill Tunnel in Central City, and shipped ore to his Bostwich Mill in Black Hawk. Kruse was born in Denmark in 1846, joined a brother in Central City in 1860, and became an egotistical, self-made mine speculator. He was involved in David Belden's Belden & Tennal Mining Company, the Humboldt Mine at Central City, and a profitable store in Gregory Gulch. He also built the New York Mill in Black Hawk to treat his and other mine owners' ore. Kruse ruled with an iron fist and disliked Locke. In a tramway board revolt, Kruse attempted to reduce Locke's salary to \$300 per month (the average miner made \$75 per month, for comparison). Locke resigned next year, and was replaced by Kruse.³⁰

Kruse attempted to squeeze more profit from the railroad and only caused problems that lasted for years. With the board's blessing, he cut the railroad's operating budget and maintenance suffered. Derailments and service interruptions consumed the savings. Kruse also gradually raised rates so high that mine operators again turned to wagons, reducing the railroad's business. In 1896, the board of directors temporarily replaced Kruse with Bostwich, in part for public relations and in part to change policy.³¹

Kruse eventually returned to management, and despite this, the tramway became more profitable than ever. By 1904, the system had 24 miles of track and hauled 300 tons of ore per day. In this condition, the tramway became an attractive addition to the Colorado & Southern Railroad, which had only recently purchased the Colorado Central. Colorado & Southern had been relying on the tramway as a regular source of freight, and realized that it was vulnerable to acquisition by hostile carriers. Should another railroad company buy the tramway, that company might starve the Colorado & Southern and force the closure and eventual sale of the line to Black Hawk. Thus, Colorado & Southern purchased the tramway in 1904 for \$150,000, much of which went to stockholders, creditors, and directors.³²

With the experience of a statewide railroad system, Colorado & Southern managed the tramway well. The carrier continued regular service, maintained reasonable fees, and prolonged the mining industry. But, the industry lasted only as long as the gold veins offered ore. Production declined during the 1910s and with it the tramway's freight income, forcing the

²⁹ Ferrell, 1970:21.

³⁰ Ferrell, 1970:29, 37.

³¹ "Mining News" *EMJ* 7/4/96 p12.

³² "Mining News" *EMJ* 7/28/04 p158.

railroad into debt around 1914 and bankruptcy in 1916. After several years of loss, the Colorado & Southern shut down the tram in 1917 and dismantled track and yard.³³

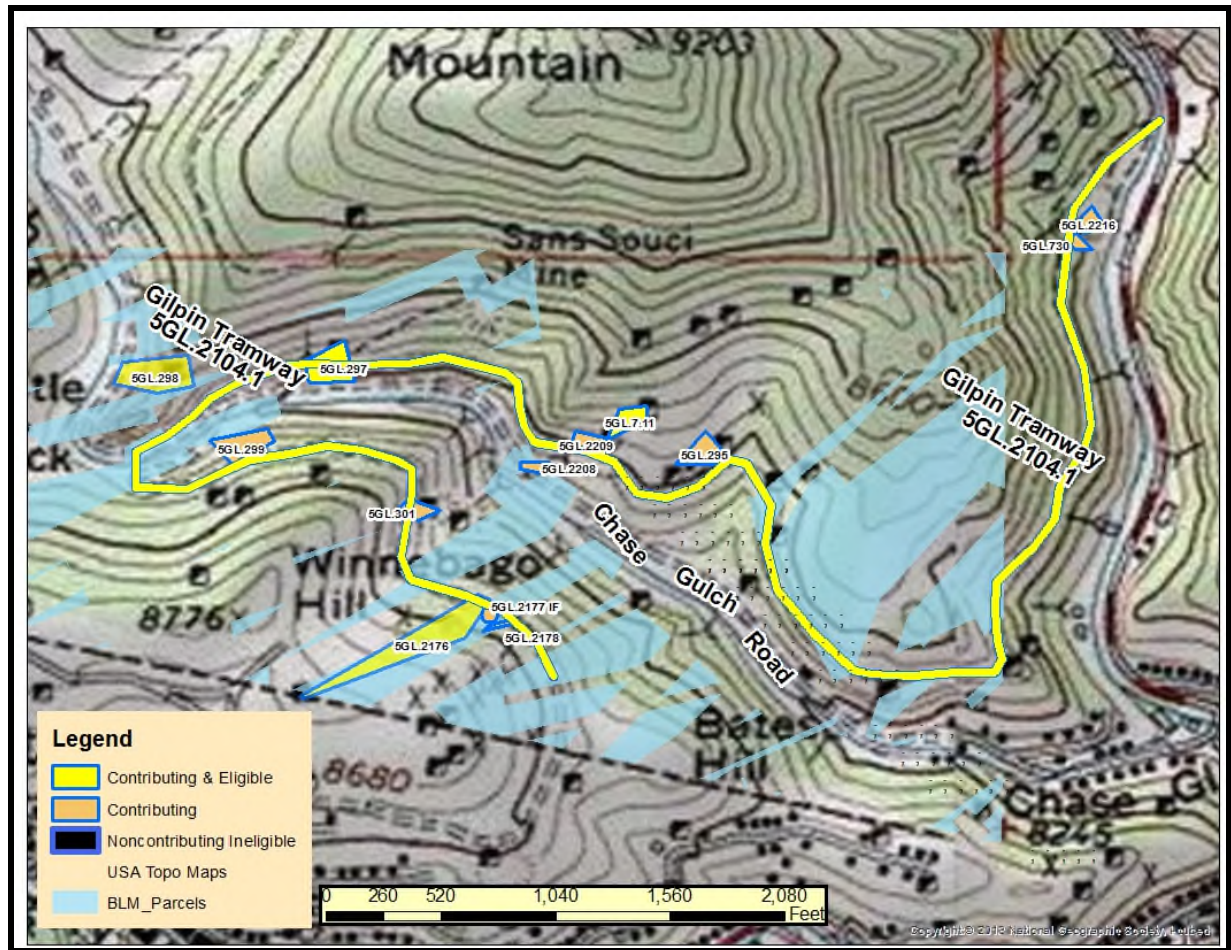


Figure 4.35: The enlarged topographic map charts the Gilpin Tramway segment recorded as 5GL.2104.1. The polygons outline mines served by the railroad. 5GL.7.11 = Robert Emmett Shaft; 5GL.295 = Maryland; 5GL.297 = Allie; 5GL.298 = Castle Rock; 5GL.299 = Ellery; 5GL.301 = Queen of the West; 5GL.730 = Josephine; 5GL.2176 = Maryland Second Discovery; 5GL.2177 = Prospect Adit; 5GL.2178 = Mine; 5GL.2208 = Robert Emmett; 5GL.2209 = Robert Emmett; 5GL.2216 = Brack Hollow.

Gilpin Tramway Description

Linear resource 5GL.2104.1 is the Gilpin Tramway's main line from the North Fork of Clear Creek, through Chase Gulch, to Winnebago Hill's south flank. Total length is 2 miles, ascending from 8,200' to 8,600' elevation. The grade can be described in 23 segments separated by major landmarks and changes in character.

Segment 1, and the grade itself, begin abruptly on the east side of North Fork of Clear Creek. At one time, the railroad crossed over a bridge and curved north to its switchyard, but the creek and construction of Highway 119 on the east side erased all evidence of bridge and grade. The existing bed begins its gentle ascent around Maryland Mountain's east flank, contouring

³³ Ferrell, 1970:65.

approximately 610' southwest to the Brack Hollow Mine (5GL.2216). Within the first 30', the grade reaches an intersection with a spur that at one time led to the Midas Mill (unrecorded). The main bed and switchback are retained by an expertly built dry-laid rock wall ranging from 3' to 7' high, depending on micro-topography. The bed was graded with cut-and-fill methods where workers used picks, shovels, and dynamite to incise a cut into bedrock, and then stacked the wall to retain a basement of angular rubble fill capped with packed sand and gravel as a surface and track ballast. In Segment 1, the wall was 600' long, of which 140' has completely collapsed and 70' somewhat crumbled. The bed is 8' wide and well-preserved.

Segment 2 can be termed Brack Hollow Crossing. The Brack Hollow Tunnel (5GL.2216) was driven southwest into a minor drainage well before the tram bed was constructed. The grade route brought the bed directly in front of the tunnel. But because the mine existed first, the tram's engineer had to make accommodations. In particular, the grade crossed the drainage with a combination fill berm and bridge for both the tunnel and storm runoff. Similar to a causeway, the berm was 18' wide at the base, 12' wide rim-to-rim, and 105' long retained by a rock wall and log cribbing. The bridge crossed an 11' gap in the southern one-third, with cribbing keeping the gap open. The bridge provided 7' clearance above the tunnel's access. The bridge is gone and the southern cribbing wall has fallen over, allowing some of the rubble basement to spill downslope.

Segment 3 extends southwest from Brack Hollow and immediately crosses the Josephine Mine's dump (5GL.730), on an adjoining vein. The bed manifests as a depressed trough between the tunnel and dump 6' wide and 104' long.

Segment 4 ascends gently southwest 1,388' along Maryland Mountain, from the Josephine Mine to an area of granite outcrops and cornices, where the grade changes character. Workers constructed the segment with cut-and-fill methods, erecting dry-laid rock walls 3' to 4' high to retain rubble basement and packed sand and gravel surface where needed. The bed is 9' to 11' wide, except for a deeper cut 20' wide at the northeast end. The cut-bank is a mix of soil and blasted granite bedrock 2' to 7' high. The two walls in the segment are 366' and 60' long, and well-preserved.

Segment 5 begins where the grade changes character. Unavoidably, the grade traversed a 768' long zone of granite bedrock outcrops, cornices, and cliffs. Rather than blast the bed into rock, workers built up a section with expert dry-laid rock walls holding back rubble fill and sand and gravel surface. The walls range from 4' to 12' high and lean inward to counter soil creep. Approximately 266' from the Segment's northeast end, the bed crosses a 70 degree cliff with little footing for the wall. Workers thus reinforced the wall with a distinct rock buttress 6' wide and 12' long. The bed itself ranges from 10' to 15' wide around curves. At the southwest end, the segment crosses a minor drainage, the bed being 20' wide retained by a wall 12' high with one of the stone culverts described in archival sources. Countersunk into the bed, the culvert is 3' wide, 4' deep, and 12' long retained by rock walls.

In *Segment 6*, the grade reverts to a simple cut-and fill bed 9' to 11' wide and 328' long. Rock alignments retain the bed's shoulder in places.

Segment 7 passes above the Smith Mine (5GL.644), its bed curving abruptly west and changing character again. Environmental conditions revert to steep slopes of primarily bedrock and cornices, and workers used the same general construction methods and materials as Segment 5. The bed begins as a bench 22' wide retained by a solid rock wall 14' high. The bench extends west approximately 300' and had a siding, suggested by clinker. After the siding, the bed constricts to 9' and traverses to a passage between a granite pinnacle and the mountainside. The segment's length is 600'.



Figure 4.36: The west view depicts Segment 7, wrapping around Maryland Mountain's southeast extension. Note the rock wall at left. Segment 6 extends right. Source: Denver Public Library Z-3497.



Figure 4.37: The 2014 photo approximates the same vantage point as above.

Segment 8 is 90' long, passing through a narrow saddle between a granite spire to the south and bedrock outcrops on the mountainside, to the north. Workers graded the bed with cut-and-fill methods, pushing back-dirt downslope. The bed is a trough 8' wide through the saddle, the back-dirt and cut-bank 20' in width.

Segment 9 begins where the bed emerges from its pinnacle passage. The bed widens to 20' and is again retained by rock walls. Approximately 230' west of the pinnacle, the bed constricts to 8' and the rock wall transitions into a section of log cribbing 30' long. Workers probably installed the cribbing to repair a historic collapse. The area collapsed again, exposing the cribbing and toppling a 64' section of the wall. The grade changes character 660' west of the pinnacle, reverting to simple cut-and-fill construction. A property boundary fence marks the transition. The segment is in good overall condition. Only small portions of the continuous wall broke away and collapsed, and the bed surface is slightly overgrown with Gambel oak and pine saplings.

Segment 10 contours and ascends gently across a slope with enough soil for traditional cut-and-fill construction methods. The bed was originally 11' wide, but soil creep reduced the surface to 8' wide. The segment is 320' long and ends at a substantial drainage crossing.

Segment 11 wraps through a substantial but dry, seasonal drainage. The grade curves from northwest to southwest, with the drainage descending steeply south. Originally, one of the timber bridges mentioned in archival sources spanned the drainage, and workers replaced it with rubble fill retained by a rock wall. The segment is 108' long, the fill 20' wide, and the retaining wall 20' high. Rails used for reinforcement in the rockwork indicate that the wall was built after initial construction. A stone culvert 6' wide and 3' deep crossed the segment's center, carrying runoff under the track and over the wall. The culvert has been washed out by flashfloods, but some rockwork remains intact.

Segment 12 begins after the drainage crossing, with the bed resuming its cut-and-fill form. The bed ranges from 9' to 11' wide. A road bulldozed by DRMS during the early 1990s crosses the grade 600' west of the drainage. Rock walls 2' to 3' high intermittently retain the bed's shoulder to the segment's end at the Robert Emmett Level 1 Tunnel (5GL.2209), 970' west. The bed is well-preserved and flanked by encroaching trees and Gambel oak.

From the Robert Emmett Level 1 Tunnel, *Segment 13* curves from west to north, crossing a rugged terrain of granite outcrops, cliffs, and ribs a distance of 530'. The terrain and segment end at the Centennial Extension Mine (5GL.723). The entire segment is retained by a stout rock wall 8' to 16' high constructed directly on the bulges of an uneven granite cliff. The middle 180' wrap tightly around a rock cornice, where workers broadened the bed to 25'. They erected a curved wall around the cornice, backfilling the interior with rubble but actually paving only the inside 12' for the rail bed. The outer 12' of bed is composed of rough cobble and boulder fill. In a few places, workers pinned the wall to bedrock by hammering iron rods into drill-holes. The segment and its rock walls are in good condition but crowded by pine and fir saplings.

Segment 14 contours 1,014' from the Centennial Extension to the Allie Mine (5GL.297). The segment was graded with cut-and-fill methods, and workers erected a few short rock walls to retain the bed over low points. The most substantial was 93' long and 10' high, crossing a minor drainage. The bed is 10' to 12' wide, well-preserved, and becoming overgrown.

As designed, the route passed well below the Allie Mine's original tunnel. The mine's operators then bored a second, lower tunnel at track level to facilitate hauling off ore. *Segment 15* now crosses the lower tunnel's dump, manifesting as a bench 180' long and 14' wide. Soil creep reduced the available width to 10'.

Segment 16 extends 96' west to an intersection with the Allie Mine's wagon road. The bed was 14' wide to provide space for wagon traffic, the road descending sharply down and southwest. Beyond the road, the bed changes character.

From the Allie to its Chase Gulch crossing, *Segment 17* passes over mixed terrain. For 640', the bed traverses bedrock outcrops and cornices, steep soil slopes, and talus and boulder gardens. Workers graded the bed with cut-and-fill methods where soil permitted, otherwise incising it into the slope or building rock walls to retain the surface. The grade passes directly below Castle Rock and the Castle Rock Mine (5GL.298), where trains took on ore. No evidence of the stop or loading chute remains. The segment's west end intersects present-day Chase Gulch Road, created with a bulldozer several decades ago. The road gradually cuts off the bed's last 70'. In terms of condition, the segment is among the grade's worst. Many of the walls have collapsed, some cut-and-fill portions have eroded and slumped, and storm runoff has washed thick gravel and cobble fans over some areas. The segment is also becoming heavily overgrown.

Segment 18 crosses Chase Gulch in an arced, horseshoe curve, bringing the grade from southwesterly to south. The crossing was fairly complex. On the gulch's north side, below Castle Rock, workers extended a spur (5GL.2104.2) along the creek and up the gulch to the Tucker Mine and Mill. Present-day Chase Gulch Road destroyed the junction's historic attributes. The main track curved across Quartz Creek over a short bridge constructed between raised berms similar to a causeway. The railroad's designer purposefully chose the location to take advantage of a diversion dam (5GL.2168), which provided an elevated crossing. The causeway was 75' long and 13' wide, retained by log cribbing on the upstream, west side, and a rock wall 7' high on the downstream, east side. The bridge gap between them was 18' across. The cribbing is now gone, the rock wall partially collapsed, and the bridge gap defined but heavily eroded. On the gulch's south side, the bed crosses the original Chase Gulch Road (5GL.2126.2) in its ascent along the creek side.

On the south side of Chase Gulch, *Segment 19* continues its gentle ascent and curves east. The bed was constructed using cut-and-fill methods, with rock walls 2' to 3' high retaining the shoulder over low points. At 480', the bed reaches the segment's end, marked by the Ellery Mine (5GL.299) and its collapsed shafts, immediately downslope.

At the Ellery Mine, the grade changes character beginning *Segment 20*. Workers partially incised the bed into the mountainside and used boulders exhumed in the process to create a well-built retaining wall. The Ellery Mine's two shafts catastrophically collapsed and created massive subsidence pits that calved off portions of the bed above. In so doing, however, the collapse craters created cross-sections that reveal construction methods and workmanship for the bed's basement. Workers simply erected a rock wall around 3' thick and backfilled the void behind with boulders and cobbles in a matrix of sand and gravel. The methods probably extend throughout the entire grade. A wall retains the entire segment, 990' long. The wall ranges from 3' to 6' high, and the bed is 9' to 11' wide. Condition is excellent. The segment ends where the bed widens significantly for a siding, which was never finished.

Segment 21 curves around Winnebago Hill's northeast extension, where workers expanded the grade for a siding, which they never completed. With rock walls 5' to 11' high, the workers in essence retained a widened basement fill, but never paved all with sand and gravel ballast. They only paved the inner, southern strip for a single track. The siding segment begins as 13' wide at the west end, expands to 26' a short distance east, and remains thus to the east end, for a total distance of 300'.

In *Segment 22*, the bed constricts to 11' and then expands again to 18' as it passes through the Queen of the West Mine complex (5GL.301). To retain the bed as it crosses granite bedrock outcrops, workers erected a stout wall 6' to 13' high with several lower wall segments below to reinforce the footing. The segment is very well-preserved and its walls form a landscape icon visible from vantage points throughout Chase Gulch. At the south end of the Queen, the bed constricts and becomes a simpler cut-and-fill construct.

Segment 23 ascends approximately 1,240' from the Queen to an open space gate marking Black Hawk City boundaries. The grade changes character there. From the Queen, the bed was graded with cut-and-fill methods and retained in a few places by short wall segments 2' to 3' high. Where the bed curves through a substantial drainage, workers widened it to 18' to accommodate the track. Local residents used the drainage as a dump, and much refuse remains. The bed is well-preserved. As the grade wraps southeast around Winnebago Hill's south flank, it changes and becomes a bed of waste rock fill retained by rock walls.

A sparse assemblage of artifacts is distributed along the grade's length, nowhere concentrated. Historic items include cut nails, wire nails, baling wire, track bolts, rail spikes, timber spikes, and amethyst bottle glass. Clinker from parked locomotives is concentrated on the grade's only siding, located above the Smith Mine.

Gilpin Tramway Condition and Integrity

As a railroad grade, the tramway is in excellent condition, with major disruption at only three points along its two-mile length. The tramway's northeastern end, at one time crossing North Fork of Clear Creek, has been cut away by washout and construction of Highway 119. The disruption does not, however, compromise the resource's continuity because the creek crossing is a natural break in the route. The second interruption is in the grade's horseshoe curve across Chase Gulch's western end. Present-day Chase Gulch Road was bulldozed up the gulch floor's north side and through the grade, erasing a 30' wide section. The breach is narrow, with the grade otherwise being readily apparent on either side of the interruption. The third disruption is at the Ellery Mine (5GL.299) where catastrophic collapse of two shafts calved off 60' sections. But the collapse was also positive. The collapse zones neatly exposed cross-sections revealing the grade's construction methods and materials.

The remainder of the grade features its original bed, surface, cut-banks, and rock retaining walls where built. Some sections have suffered natural decay, but not extensive enough for substantial impact. The worst are Segment 1 at the northeast end and Segment 17 between the Allie Mine (5GL.297) and Chase Gulch floor. In these segments, extensive retaining wall sections have collapsed and reduced the bed's width. Stands of young aspens and ponderosa pines are beginning to take hold on the contours around Maryland Mountain. Overall, the grade's good state of preservation is noteworthy. The flaws are minor relative to the resource's length.

The tramway grade retains sound integrity. On a broad scale, the grade conveys design of the overall route, as well as feeling and association of mining district railroads. Chase Gulch, with its numerous mining resources, is an excellent landscape setting. On a smaller scale, nearly all sections also impart design, construction methods, and materials of the grade itself. The extensive rock walls in particular reflect traditional ethnic Cornish and Welsh methods.

Gilpin Tramway Significance

The Gilpin Tramway is among the more significant resources in Chase Gulch and greater Gilpin County. Within Chase Gulch, the tramway is an omnipresent feature in the landscape. The bed and its rock walls contour around Maryland Mountain's eastern and southern face, curve through the gulch's head, and wrap around Winnebago Hill on their route southwest to Central City. The bed is a prominent linear feature visible throughout, conveying a sense of scale and physically tying together the landscape and its mines. The tramway also contributes to the landscape's feeling of industry vanished.

The tramway is recommended individually eligible for NRHP Criteria A-D, and SRHP Criteria A-C and E. The tramway is significant under Criterion A for several reasons. The railroad was the first and best-known two-foot gauge carrier in the West, and recognized for more switchbacks than any other in the United States.³⁴ The tramway's Gilpin County location, route design, timeframe, and unusual size contributed to its notoriety in the mining and railroad industries, as well as among people in Colorado, and amid historians today.

The tramway greatly influenced the course of the county's mining history. The railroad carried immense tonnages of ore from mine to mill at lower fees than wagons, greatly reducing operating costs for mining companies. The companies in turn were able to produce lower grades of ore, which were found in greater abundance. The lower grades then sustained the industry for a longer time than otherwise would have been possible and softened its inevitable decline. When the railroad ended service in 1917, the industry collapsed and never recovered.

The tramway was an important link in commerce and wealth production. The tramway helped the mining industry generate a substantial amount of money. Some of the money circulated through the local economy and bolstered it, while much of the wealth left the county only to be exchanged for goods and services. The railroad then hauled some of those goods back up to the mines, which used them to generate more wealth.

During the time when the tramway operated, railroads were generally perceived as hallmarks of industrialization and success. Gilpin County boasted not one, but two railroads: the Colorado Central connecting the Central City district with the outside world, and the tramway wending among the county's mines. The tramway was thus not only an important symbol of success to county residents and mine owners, but also the rest of Colorado and the greater mining industry. Further, the tramway was an important symbol to investors who were more likely to direct their capital into Gilpin County mines than they may have been otherwise.

In terms of Criterion B, the Chase Gulch tramway segment is directly associated with important people. In particular, Bradford H. Locke was among the tramway's incorporators in 1886, and manager of construction and then operations until resignation in 1889. Locke was a hands-on manager who participated in the initial route survey, followed by its construction and then operations. His duties regularly placed him on the grade and over its rails once in service. Locke was significant as a prominent Gilpin County mine operator who helped forward the industry during the 1870s and 1880s. He funded prospecting and development of minor operations, brought the Hard Money into sound production, and served as manager for absentee owners in other properties such as Lucerne. Locke and his wife Josephine were also Central City community activists.³⁵ Andrew N. Rogers was another significant Gilpin County figure directly associated with the tramway. Although he was himself a railroad engineer and participated in the

³⁴ Ferrell, 1970:19, 24.

³⁵ *Colorado Mining Directory*, 1883:282, 290.

tramway's design, his physical presence on the ground in a meaningful way is not as clear as Locke's. More research is necessary to determine eligibility under Criterion B for Rogers.

The tramway is recommended eligible under Criterion C in several areas. In overview, the tramway segment is an excellent example of a miniature-gauge railroad grade, conveying how routes were engineered through difficult mountain terrain. The route reflects the use of contouring, natural features such as gaps between Maryland Mountain and jutting pinnacles, and manmade features like purposefully crossing Quartz Creek over a diversion dam.

The tramway segment also conveys construction methods and workmanship for the terrain. Workers used common and inexpensive cut-and-fill methods where they could, but built the bed upward and outward to traverse the countless rock ledges and outcrops. To do so, the workers erected 3' thick dry-laid rock walls, backfilled the space behind with boulders and rubble, and then paved the ragged material with sand for a smooth surface. Some high wall sections were stabilized with iron pins and masonry buttresses.

The walls themselves are products of traditional Cornish and Welsh masonry practices. The mining industry enticed Cornish and Welsh in number to Gilpin County during the 1860s and 1870s because they were among the world's most experienced miners at the time. The Cornish and Welsh, in turn, brought their masonry tradition with them, developed over centuries in their homeland where lumber was scarce and rocks abundant. The ethnic stamp is evident throughout the county's structures, foundations, buildings, and tramway.

The tramway segment is also recommended eligible under NRHP Criterion D and SRHP Criterion E. The segment is the first 2 miles in a 24-mile system winding among the mines of Central City, Nevadaville, and Russell Gulch. Archival research and documentation of the rest of the system can reveal important information regarding route design, grade construction, integration with mines, and small-scale structures such as bridges and culverts. The study would be important because miniature-gauge railroads were rare and important in their mining districts, and few if any have been studied in-depth.

Gilpin Tramway Management Recommendations

The tramway segment is a major landscape component and individually eligible. It also crosses numerous BLM land tracts. Disposal of those tracts from federal to local government constitutes an adverse effect. Mitigation may be required.

The tramway is a fundamental resource in heritage tourism planning and should be preserved in its own right. The following are a few broad suggestions:

- Adapt the grade as a recreational and interpretive trail.
- Consult with historical specialist during planning process to verify compatibility of improvements.
- Improvements must maintain the grade's historic character, including surface, bed width, and rock walls. Invasive improvements may compromise NRHP standing.
- If surface is improved, use material similar in texture and color.
- Thin saplings. Stumps to grade. Remove major boulder and rubble obstructions.
- Rebuild collapsed wall sections, using original blocks as much as possible. If new blocks are incorporated, they should be like the original.
- Signage can explain railroad history and highlight noteworthy sections and features.

Gilpin Tramway Heritage Tourism Potential: High

The Gilpin Tramway is among the more important and useful resources around Black Hawk. The tramway has great tourism potential both in itself and as a natural access corridor connecting most of Chase Gulch and Maryland Mountain.

Considered alone, the railroad grade is a ready-made tourism draw. The grade is two miles long, curves through an impressive natural environment, and offers numerous historical features of interest. Combined, the grade's qualities can interest outdoor recreationists and tourists seeking contact with the area's history. Interpretation of the grade's historical features and adjacent mines is necessary. Historical features worth interpreting should be reached through consensus.

As an access corridor through much of open space, the tramway is a platform for overview stations and loop trails. The railroad grade offers a number of overview points of the North Fork, Black Hawk, Winnebago and Bates hills, Maryland Mountain, and Chase Gulch. Signage or interactive media at the vantage points can identify landscape features and sites for visitors, and provide broad perspectives on the area's history and natural qualities. Further work will be necessary to identify exact points. All station improvements should be minimal, unobtrusive, and maintain the tramway's character.

The tramway is also a good platform for interpreting the better mine sites it comes in contact with. From northeast to southwest, the grade passes through or next to the Brack Hollow (5GL.2216), Josephine (5GL.730), Smith (5GL.644), Maryland (5GL.295), Robert Emmett Level 1 (5GL.2209), Centennial Extension (5GL.723), Allie (5GL.297), Ellery (5GL.299), Queen of the West (5GL.301), and Maryland Second Discovery (5GL.2176). All can at least be acknowledged if not better interpreted with signage posted on the grade.

The tramway can also become a platform or starting point for a variety of loop trails ranging from athletically challenging to slower historic site interpretation. Several proposed interpretive loops include original Chase Gulch Road (5GL.2126.2), Oro Mine and its roads (5GL.2150), Robert Ingersoll Placer and infrastructure (5GL.2162), Winnebago Hill Haul Road (5GL.2170), Virginia Mine Road (5GL.2173), and Aetna Mine (5GL.2211) to Centennial Tunnel (5GL.2206). The above loops are on Chase Gulch's south side, and the north side offers at least as many routes.

Chase Gulch Road was a main artery in a complex transportation network. The road linked the gulch's mines and residential complexes with Black Hawk, and as an artery, it was also connected to more distant destinations by lighter-duty feeder roads. Some of those other destinations include surrounding mines, as well as Central City, Winnebago Hill, and Maryland Mountain. The original route began in Black Hawk, followed the gulch's south floor, crossed over to the north at the Centennial Extension Mine (5GL.723), and wrapped around Castle Rock heading northward into Quartz Valley. In 1903, the Gilpin Tramway used the Quartz Valley segment for a spur to the Tucker Mine, forcing the road to be moved. The road now crossed back over to the south side at the Belden Tunnel (5GL.7.12) and continued up into the valley. The 1903 replacement segment from Belden Tunnel into Quartz Valley remains preserved and is discussed below. The segment disappears in a wetland and reemerges on the same side of the valley, this continuation having been recorded by ERO Resources in 2014 as 5GL.2126.1.

Present-day Chase Gulch Road is different from the original. Today's in-use road was bulldozed entirely up the gulch's north side irrespective of the original route's crossing from south to north, and south again. The modern road erased the historic segments that at one time existed on the north side. The present-day road is not discussed here because it is not a historic resource.

Original Chase Gulch Road retains integrity, is a contributing element of the landscape, and is recommended eligible. Total length is 1,610'. The road's western half remains on fairly flat Chase Gulch floor while the eastern half contours along an extremely steep, north-facing slope. The gulch floor features riparian habitat and the slopes are covered in doghair fir and pine forest. Much of the route crosses BLM land.

Chase Gulch Road History

Chase Gulch was an important segment in the transportation network converging on Black Hawk. During the early 1860s, the gulch mouth was home to a number of stamp mills, while the gulch's upper reaches featured a few as well. The gulch was also a conduit for ore produced in Central City and freighted by wagon to Black Hawk's other mills. The gulch became a source of ore in itself beginning in the 1870s, the product of these mines also flowing down to the City of Mills. The constant movement of ore, freight, and workers to the mines was possible only over good quality roads.

As an important transportation corridor, Chase Gulch naturally featured one of the better roads in the area. Archival information specific to Chase Gulch Road could not be found, but a general history can be pieced together from historic photos, occasional documentation on claim survey plats, and physical association with mine and mill sites.

Archival sources allude to a road in the gulch during the 1860s, necessary for freight service to period stamp mills.³⁶ The road connected Central City with the mills and continued to Black Hawk. Describing the route from northwest to southeast, the road began somewhere in Quartz Valley and followed the east side of Quartz Creek to Castle Rock. The road wrapped around the pinnacle, continued east down Chase Gulch, and crossed to the south side where the floor narrowed. The road crossed here to access the Virginia Shaft (5GL.724) and the Aetna

³⁶ *Rocky Mountain News* 12/17/1866 p1 c2.

Mine (5GL.2211), which were in production during the early 1860s. The road then continued along the south side to the stamp mills in Black Hawk. Development of prospects and mines in the gulch during the 1870s cemented the route as a permanent thoroughfare. The road was, however, not exclusive to Chase Gulch and, as noted above, it was also an artery for traffic from elsewhere. Feeder roads extended northwest into the forests where logs were cut, and several more crossed Bates, Winnebago, and Negro hills to mines around Central City. The Bates and Winnebago hill roads are 5GL.2183 and 5GL.2170, respectively.

Completion of the Gilpin Tramway railroad in 1887 affected Chase Gulch Road but in no way rendered it obsolete. Prior to 1887, all freight throughout Gilpin County moved by wagon, and at great cost. A handful of wealthy mine owners built the railroad to compete with freight outfits and made a good show for a time. The tramway hauled weighty tonnages of ore from collection points and the principal mines in Central City, Nevadaville, and Russell Gulch. The railroad was, however, restricted to its fixed route, leaving smaller mines without service. Most mines around Central City and all those in Chase Gulch still relied on wagons, which used Chase Gulch Road. Further, the tramway owners gradually increased haulage fees to the point where wagons were again competitive by the mid-1890s. Chase Gulch traffic undoubtedly increased as a result.³⁷

The tramway affected Chase Gulch Road in 1903, this time physically. The tramway's main line followed a broad horseshoe curve through the gulch, crossing Quartz Creek and Chase Gulch Road at Castle Rock. In 1903, the tramway added a spur from Castle Rock to the Tucker Mine northwest in Quartz Valley.³⁸ Original Chase Gulch Road provided a good surface for the new rail bed, so the tramway smoothed the road, laid track, and finished it with ballast. And yet, a road was still needed, so local interests graded a replacement segment on the gulch's south side. The replacement began in Quartz Valley, continued south past the foundation of an abandoned 1860s stamp mill (5GL.2154), crossed directly over the foundation of another period stamp mill (5GL.2167), and reached a strategic intersection at the tramway's main line. The intersection was on the south side, with an 1860s road ascending southeast up Winnebago Hill, the tramway crossing the creek, and another road descending east past the Belden Tunnel. New Chase Gulch Road subsumed the earlier road passing the Belden Tunnel, and crossed back to the gulch's north side at this point. The replacement route remained in service through the 1930s.

Chase Gulch Road Description

The 1903 Chase Gulch Road can best be described in six segments. The description follows the most common direction of travel, from Quartz Valley to the road's Quartz Creek crossing farther down in Chase Gulch.

In *Segment 1*, the road first becomes identifiable on the west side of Quartz Creek, at the Nelson Property's entry gate (5GL.2153). At the gate, the property's unrelated, circa 1960s two-track crosses the creek and Chase Gulch Road, and ascends southwesterly. Chase Gulch Road extends south-southwest across a flat meadow and passes a stone foundation for an 1860s stamp mill (5GL. 2154). During the 1960s and 1970s, the Nelsons gathered and parked obsolete agricultural and mining equipment in the meadow on both sides of the road.

From its beginning to the segment's southwest end, the road is simple in form and construction. The tread is packed sand and soil 10' wide with a uniform surface. The upslope,

³⁷ "Mining News" *EMJ* 7/4/96 p12.

³⁸ "Mining News" *EMJ* 10/12/07 p707.

northwestern edge features a berm 6" high while the southeastern edge has a minor drop-off. Long unused, the segment is well-preserved but difficult to distinguish from afar, having been overtaken by lush grass. At the meadow's southwestern end, the road crosses a gully and passes through a placer mine, *Segment 2*.



Figure 4.38: The enlarged topographic map illustrates Chase Gulch Road (5GL.2126.2) and Winnebago Hill Haul Roads (5GL.2170.1 and 5GL.2170.2). The haul roads were one-way routes directing ore wagons onto Chase Gulch Road for the final trip east to the mills at Black Hawk. The polygons are mines associated with the roads, shown for context. 5GL.7.12 = Belden Tunnel; 5GL.299 = Ellery Mine; 5GL.2202 = Black Quartz; 5GL.2203 = Centre, Midlevel; 5GL.2205 = Ranney Mine.

Segment 2 passes through the lower, east end of the Robert Ingersoll Placer Mine (5GL.2162). The road enters the site by crossing south through a minor gully that drained some of the mine's effluent. The gully is 14' wide, 5' deep, and ascends southwest into the mine workings. At one time, the gully had a corrugated pipe culvert, but this became plugged with sediment. Storm runoff overflowed and cut through the road, revealing in profile the segment's general construction methods. Workers used cobbles to build up a rough base around 2' thick and 16' wide for the bed, pouring 18" of sand and soil over for the tread, which is 12' wide.

The segment wraps around the placer mine's dump of sluice tailings and crosses another mine drainage gully, 7' deep and 20' wide rim-to-rim. Workers crossed it by installing a length of salvaged boiler smokestack as a culvert, and erecting rock walls to retain the roadbed. Fill

behind the walls consists of placer tailings over a cobble base, all 13' wide. The entire segment is well-preserved.

Segment 3 extends southeast from the placer mine to the edge of an early 1860s stamp mill site (5GL.2167), long gone when the road was graded. In the segment, the bed is 16' wide and the tread is packed sand 10' wide. In *Segment 4*, the road passes through the stamp mill site, crossing directly over the mill building's platform. The tread narrows to 8' and is slightly depressed and sandy. The two segments are intact if not slightly overgrown with young ponderosa pines.

Segment 5 continues east from the stamp mill site and reaches a complex five-way intersection at the Gilpin Tramway grade. In one direction, the tramway extends north across Quartz Creek, and in the other curves east. Meanwhile, early 1860s Winnebago Haul Road (5GL.2170.1) ascends steeply southeast. Chase Gulch Road continues northeast across the tramway. In the segment, the tread flares from 9' to 18' wide at the intersection.

In *Segment 6*, the road crosses the tramway and contours northeast across a steep slope for a distance of 150'. The tread flares from a width of 18' at the tram to a width of 10', where it was graded with simple cut-and-fill methods. The bed underneath is 18' wide including its cut-and fill-banks.

The road begins a steep northeast descent 150' east of the tramway and required better cut-and-fill construction to resist heavy wear. Workers laid down a base of cobbles and used larger rocks and boulders to hold the downslope edge in place. With sand and soil, they paved a tread 14' wide and dug a drainage channel along the upslope, southern edge to carry away runoff. The channel is a low trough 7' wide. Over time, traffic wore away the road's center, creating a rough surface of cobbles and bedrock. As cobbles became loosened, teamsters threw them along both sides of the road, eventually forming linear berms.

Around 210' east of the tramway, the road relaxes in pitch and the drainage channel ends. From this point to its crossing with Quartz Creek, the tread becomes sandy and gradually widens to 30'. The road has less evidence of formal construction; the tread created in part by leveling and in part by wagon traffic. The road passes spur to the Belden Tunnel (5GL.7.12), constricts to 18', crosses the stream, and becomes indistinct. The segment is in good condition.

Associated artifacts are few, limited to the corrugated and boiler smokestack culverts, and a few barrel hoops. Buried archaeological deposits are absent because the road's use for transportation tended not to generate materials in volume.

Chase Gulch Road Interpretation

The resource is a good example of a professionally built wagon road designed for long-term use. Most wagon roads were poorly constructed with minimal effort. Where the terrain was flat, workers did little more than remove large obstructions and rely on wagon traffic to establish the road's tread. Lack of a prepared surface resulted in potholes, ruts, gullies, and mud bogs. Where roads crossed slopes, the treads were defined by shallow cuts and little fill, creating an uneven, rocky, and sloped surface prone to erosion. Roads of this quality restricted wagon loads, slowed rate of travel, and created traffic jams. Chase Gulch Road, in contrast, was designed for heavy loads, two-way traffic, and longevity. The builders created a solid bed of cobbles to hold in place a smooth surface of sand and soil. The porous bed, sandy tread, and broad surface enhanced drainage and prevented the road from deteriorating into mud. Where the road crossed slopes east of the tramway, workers maintained ample width, built up its bed with large cobbles,

and even dug a drainage channel. For these reasons, the road is today similar to when it was in use.

Two segments do not date to 1903. Segment 6, from the tramway to Quartz Creek crossing, is earlier. The segment may have been graded during the early 1860s as a section of Winnebago Hill Haul Road, and was in use for the Belden Tunnel during the late 1870s. Segment 3, through the Robert Ingersoll Placer, dates to the 1930s. The mine was developed during this time and its effluent gullies cut the road while its growing tailings dump buried the section in between. The mine's operators constructed culverts for the gullies and graded the road around the dump. The use of corrugated pipe and salvaged smokestack are small-scale features characteristic of 1930s construction.

Chase Gulch Road Condition and Integrity

Chase Gulch Road is in excellent condition. The tread is well-preserved with original surfaces suffering minimal erosion or sediment deposition, and the underlying bed is stable with well-defined cut- and fill-banks. The culvert washout in the Robert Ingersoll Placer is the only heavily damaged section. Otherwise, Segment 1 through the meadow is overgrown with thick grass and fully intact but difficult to perceive. Segments 2-4 are becoming crowded with young ponderosa pines.

The road retains good integrity. Design of the overall route, and of the roadbed as a structure, is distinct. The road also conveys materials and workmanship used in its construction. An intact setting with mines, other roads, the Gilpin Tramway railroad grade, and natural qualities create feeling and association.

Chase Gulch Road Significance

Chase Gulch Road is significant in two ways. The road is a contributing element of the landscape. Its linear swath through forest is apparent from localized vantage points, and its sandy tread is obvious when traversing the immediate area. Further, the road is a noticeable link in a larger transportation system including Quartz Valley, the Gilpin Tramway, Winnebago Hill Haul Road, and Chase Gulch. The road also connects a number of other resources such as the Robert Ingersoll Placer and Belden Tunnel.

The road is also recommended eligible in itself. In terms of Criterion A, the road was important as an artery connecting upper Chase Gulch with Quartz Valley, 1903-1941. The road was critical for hauling ore and supplies between area mines and Black Hawk. Under Criterion C, the resource is an excellent example of its type, a professionally built wagon road. In width, pitch, a prepared bed of cobbles, and a packed tread of sand, the road reflects professional design, materials, and workmanship. The builder planned the road for long-term, heavy two-way traffic in poor conditions.

The road is also likely to yield important information upon further study. In particular, the road is an important component of a larger transportation network. In the network, Original Chase Gulch Road was a regional artery, with the 1903 section described here a replacement for that destroyed by the Gilpin Tramway. Feeder roads extended outward along both sides to various destinations including mines and centers of logging. Connector roads ventured farther and tied in with other localized networks around Central City, the North Fork of Clear Creek, and elsewhere. Some routes known as quartz roads were designed for one-way ore traffic, others

for in-bound freight, and some for multiple uses. A study of the network based on archival research and documentation of individual roads will shed light on the transportation system fundamental to the Central City district. The findings could be extrapolated to other mining regions.

Chase Gulch Road Management Recommendations

In terms of Section 106, Chase Gulch Road is a contributing element of the landscape and individually eligible. Much of the road also traverses several BLM land tracts. Transfer of the tracts from federal to local government is perceived as an adverse effect. Mitigation may be required.

The road also provides excellent heritage tourism opportunities and should be preserved in its own right. The greatest opportunity is adapting the road into a segment connecting several interpretive loop trails. Suggestions include:

- Remove saplings on road tread. Thin trees along upslope, south side. Stumps to grade.
- Road naturally becomes a ready-made trail.
- Route traffic around Stamp Mill Remnant (5GL.2167).
- Interpretive sign on Gilpin Tramway grade explaining road history.

Chase Gulch Road Heritage Tourism Potential: High

The road provides good opportunity because of its strategic location and potential as a connector tying several interpretive loop trails together. The road also conveys a feeling of seclusion and discovery. Several interpretive loop trails noted below use Chase Gulch Road as a starting and finishing point: The trails visit important sites worth interpreting.

Oro Mine Loop. The loop begins on Chase Gulch Road, at Robert Ingersoll Placer. The trail winds through the placer, ascends southeast up the Robert Ingersoll Placer Pipeline to Winnebago Hill northwest shoulder, and contours west on a wagon road (unrecorded). The trail then descends northwest on Oro Mine Pack Trail to Oro Mine, and then descends east down Oro Mine Road back to the start.

Winnebago Hill Haul Road. The loop begins on Chase Gulch Road near dam. The trail ascends east up Winnebago Hill Haul Road to Winnebago Hill's north point, and then follows a wagon road (unrecorded) contouring west to the Ranney Mine. Trail users can descend back to start on another road, or continue on the wagon road to Robert Ingersoll Pipeline, and then back to the start.

Belden Mill Loop. The trail begins on Chase Gulch Road near dam. The trail crosses Gilpin Tramway, descends on Chase Gulch Road to Belden Tunnel, and then contours east to Belden Mill. The trail then crosses Quartz Creek to present-day Chase Gulch Road, and returns to the start.

Interpret Site. Explain history of the road, the greater network, and reliance on wagon transportation.

Site 5GL.2148 Mine, Name Unknown
Project: Land Disposal

The resource was a small shaft mine on present-day Quartz Valley Road, contouring Negro Hill's east flank. The road is a county-maintained route connecting Central City with Quartz Valley and was bulldozed through the site. The surrounding hillside slopes steeply east into Chase Gulch, and is vegetated with stands of brush, aspens, and ponderosa pines amid open meadow. A few unrelated prospects are south and north. The site is 8,800' elevation and lies entirely on BLM land.

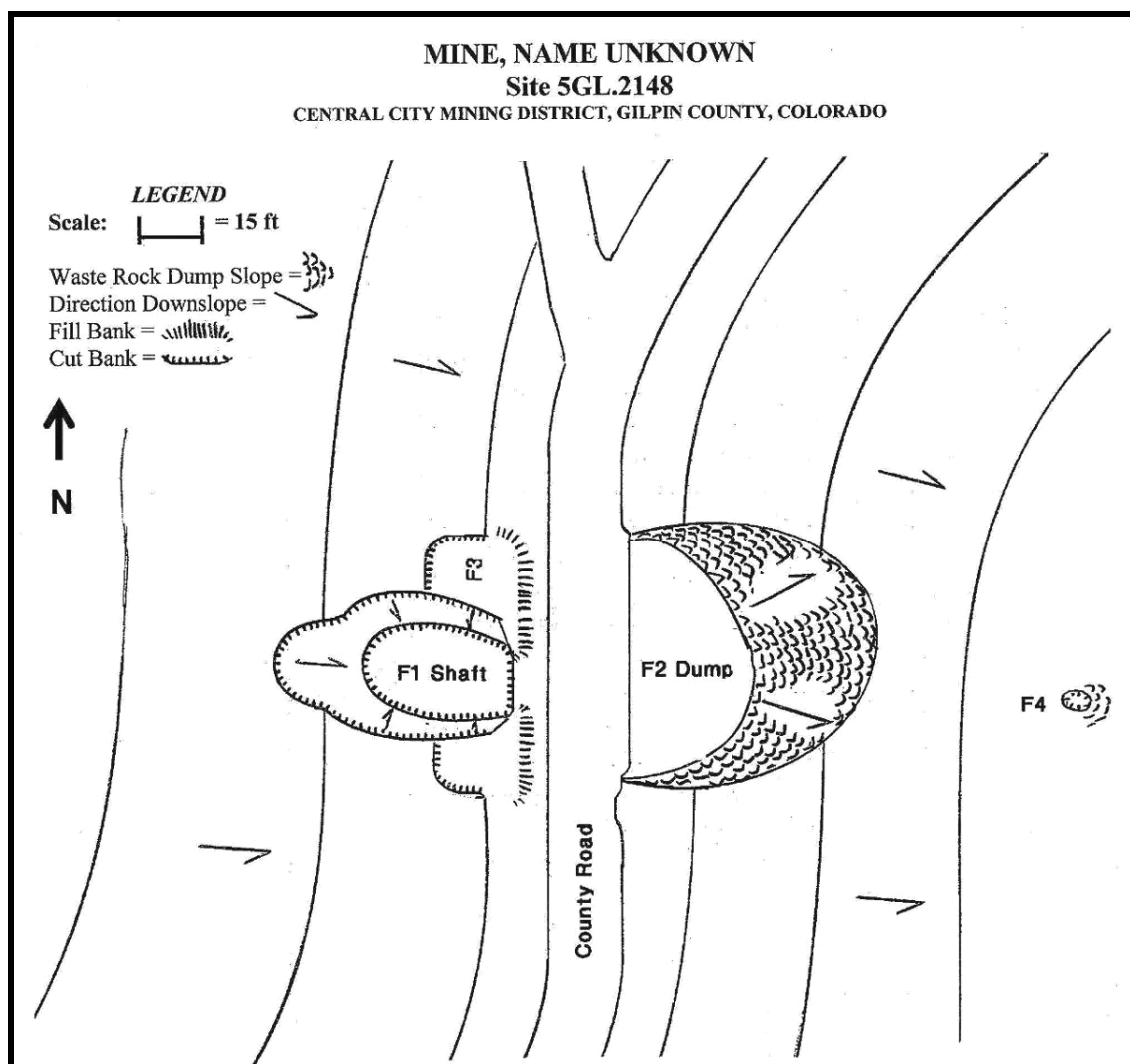


Figure 4.39: Plan view Mine, Name Unknown, 5GL.2148.

Mine History

No information could be found regarding the site because its name is unknown. A name is necessary for archival research.

Mine Description

The site is a relatively simple resource limited to a prospect pit, a collapsed shaft, its dump, and a platform. The pit (F4) is the site's earliest feature, and is 5'x8' in area and 4' deep with waste rock shoveled downslope.

A mining outfit sank a shaft (F1) to develop a vein once it had been pinpointed. The collar was originally supported with cribbing, which imploded and became an ovoid subsidence crater 25' across, 55' long, and 12' deep. Continual subsidence along the steep upslope side enlarged the pit to its present size, and local residents threw in household rubbish in recent years. In sinking the shaft, miners dumped waste rock to the east, building up a semi-circular pad of material (F2). When Quartz Valley Road was graded through the site, the pad was pushed farther east, now taking form as a fan 60'x63' in area and 6' thick. The top-surface is depressed from the move, and features a stout ponderosa.

At one time, a shaft house enclosed the shaft collar, a simple hoist, and a blacksmith shop. The mining outfit graded a cut-and-fill platform (F3) for the building, whose exact size is unknown. They centered the platform over the shaft, orienting it north-south. The platform was 20' wide and 60' long, but the shaft collapse drew in the center 25'. The two disjointed ends are now hummocky and blanketed with sod, concealing nearly all artifacts except for several cut nails and coal lumps.

Mine Interpretation

Only a few broad conclusions can be observed about the site. The small waste rock dump indicates that the underground workings were shallow and the vein poor developed. The platform around the shaft confirms that the shaft house was small and the hoist a light-duty, impermanent appliance requiring no lasting foundation. Lack of an ore bin reflects limited production. Overall, the operation was simple, short-lived, and relatively unproductive.

The site is difficult to date because archival information and a meaningful artifact assemblage are absent. Cut nails confirm a pre-1890 timeframe. The site's simple nature, small scale, and state of deterioration suggest the 1860s or 1870s.

Mine Condition and Integrity

Natural deterioration and repeated widening of Quartz Valley Road left the site in poor condition. The shaft collapsed and drew in the shaft house platform's central portion, where small-scale features were probably located at one time. Erosion washed sediment over the platform and vegetation overtook the site, erasing subtle features. Quartz Valley Road was bulldozed immediately east of the platform, truncating its eastern edge and pushing the waste rock dump east. The earthmoving further damaged features and removed much of the artifact assemblage. Central City residents also used the shaft as a refuse pit.

Integrity is compromised. Without buildings, structures, or a meaningful feature assemblage, the site lacks integrity of design, materials, workmanship, feeling, and association. The setting, however, is intact.

Mine Significance

The site is significant as a contributing element of the landscape. The waste rock dump is prominent, visible from vantage points to the east on Maryland Mountain, and lends detail to the landscape.

On its own, the site is ineligible. In terms of Criteria A and B, information is insufficient to establish association with important events, trends, and people. Under Criterion C, the site has little integrity and is not a good example of its resource type, a shaft mine. The site also has no information potential because it lacks buried deposits, complex feature systems, or a meaningful artifact assemblage.

Mine Management Recommendations

Regarding Section 106, the site is a contributing element of the landscape and lies on BLM land. Conveyance of the land from federal to local control constitutes an adverse effect. Mitigation may be required.

Mine Heritage Tourism Potential: None

The site has no potential.

Site 5GL.2149 Prospect Complex ***Project: Land Disposal***

The prospect complex is a simple archaeological resource consisting of surface excavations and a capped shaft. The site is located on the northeast side of a minor drainage descending Negro Hill's east flank. The area is 8,730' elevation and in a transition zone between ponderosa pine forest and open meadow. Slopes are extremely steep with bedrock outcrops. The entire site is on a BLM land tract.

Resource Type: Prospect Complex

A prospect complex was a group of exploratory pits, trenches, adits, or shafts. Prospectors usually dug the pits and trenches in search of a mineralized vein, and bored shafts or adits to sample it when found. Prospects by definition lacked sufficient ore for further development.

In 2010, DRMS recorded the complex as a component in the greater Gulnare Mine (5GL.2047) for a closure project. The Gulnare Shaft downslope and to the east, on a patented claim, was the site's other component. DRMS accounted for most but not all the prospect complex's features in its recording. The site was recommended ineligible, and OAHF concurred. Both the prospect complex's shaft and the Gulnare Shaft downslope were backfilled. Archival research has since determined that the prospect complex and Gulnare Shaft are actually separate resources. The Gulnare Shaft is on the Gulnare claim and vein, trending east-west. The prospect complex, in contrast, is on a separate vein that runs parallel and approximately 150' south, on

BLM land. The prospect complex was recorded again in 2014 to account for the missing features and to divorce it from the actual Gulnare site.

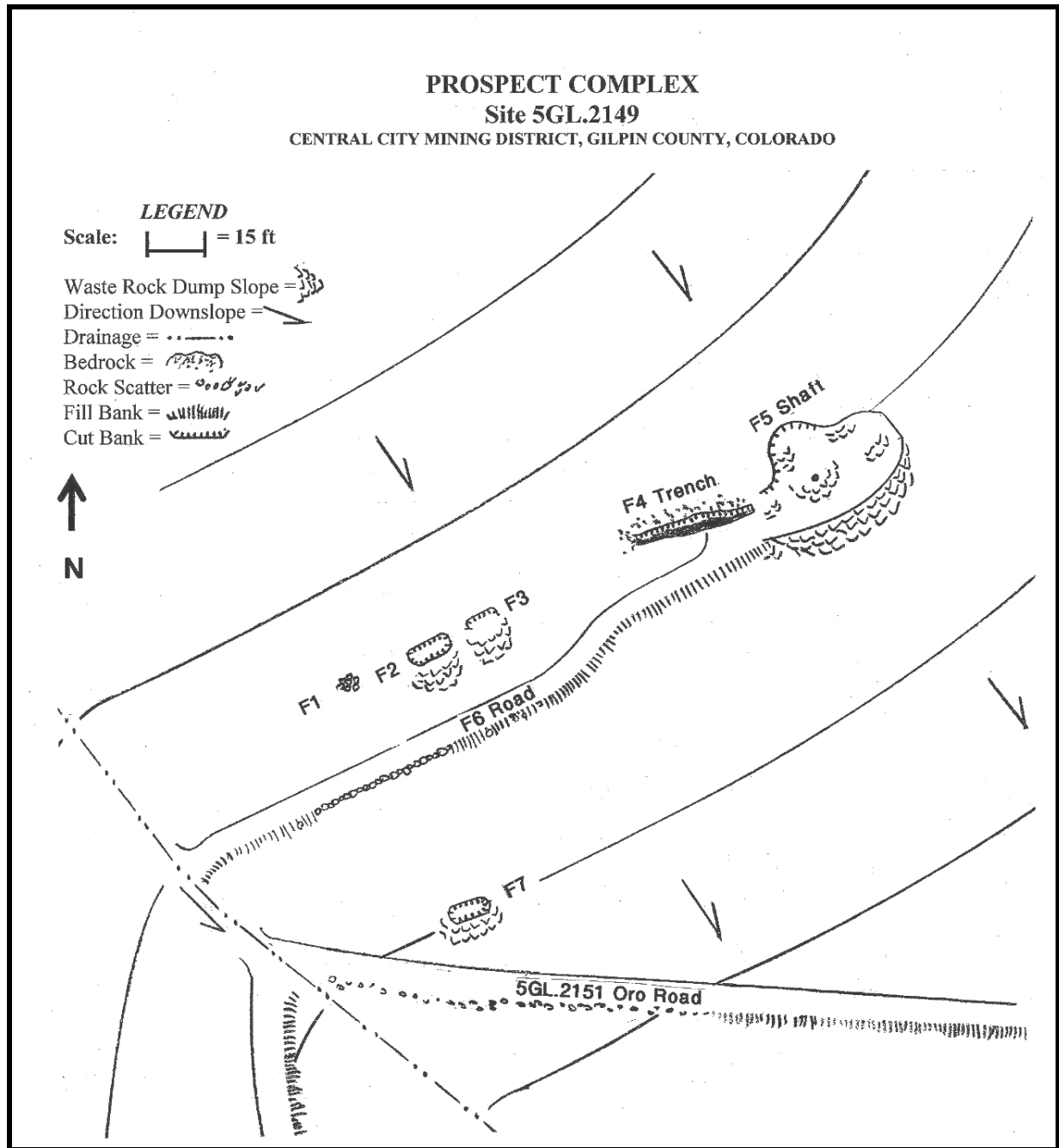


Figure 4.40: Plan view of Prospect Complex, 5GL.2149.

Prospect Complex History

Archival research found no information specific to the site because its name is unknown. Close proximity to the Gulnare Vein does, however, suggest a timeframe. The Gulnare Vein was discovered in 1859, probably drawing other prospectors to the immediate area on Negro Hill's east flank. In searching a short distance south of the Gulnare, prospectors could have unearthed the parallel formation and developed the prospect complex discussed here.³⁹

Prospect Complex Description

Prospectors dug a linear series of probes and sank a shaft on a mineralized vein trending east-northeast. In their initial search, the prospectors dug a pit (F7) 5'x8' in area and 4' deep to expose bedrock, which proved to be barren. Moving upslope, the prospectors excavated two more pits, and struck the vein in one of them. The western pit (F2) was 7'x9' in area and 5' deep blasted into bedrock, and the eastern (F3) was 5'x7' in area and 3' deep mostly in soil. Both pits are now duff-filled.

The prospectors projected the vein's direction to the northeast and found a mineralized stringer. They blasted out a ragged trench (F4) in bedrock 4' wide, 30' long, and 7' deep to better expose it. The northeast end opens outward, and the interior is blanketed with soil and more duff.

At the site's northeast end, the prospectors sank a shaft (F5) to sample the vein. In 2010, DRMS closed the shaft by bulldozing in its dump, leaving a blotch of waste rock 32'x35' in area with a pipe monument. The shaft and dump retain no integrity.

The vein's centerline was marked with a cairn (F1), now manifesting as a concentration of rocks 2½'x3' in area that settled into the ground.

One of the claim owners eventually graded a road (F6) for wagon service to the prospect shaft. They began at the Oro Mine Road (5GL.2151) in a minor drainage, and contoured 165' northeast to the shaft. The access road was 7' wide and graded with cut-and-fill methods, with rock alignments retaining the fill-bank in places. The road is mostly discernable but its surface is now partially blanketed with soil creep.

The site lacks artifacts and buried archaeological deposits.

Prospect Complex Interpretation

The prospect complex is the product of a concerted but unsuccessful effort to find gold ore. A prospect party suspected that a mineralized vein crossed through the immediate area probably by finding samples of float (weathered ore fragments) exposed in soil. They dug a pit where they thought the float came from, blasting into bedrock to be sure. The pit yielded nothing, so they moved upslope and found the vein with little additional effort. The party tracked the vein northeast, found a highly mineralized zone, blasted out the site's trench, and then sank the shaft. Both the trench and shaft could have yielded a small amount of ore, but the operation was a bust.

The fact that the prospectors found the vein quickly, without having to dig numerous pits as at many other prospect complexes, reflects experience. Although the prospectors did considerable work in rock, they maintained their tools elsewhere, probably a camp in Chase Gulch. The site thus lacks evidence of a blacksmith shop.

³⁹ *Colorado Mining Directory*, 1883:282.

The road is a curious improvement given the site's simplicity. A later claim owner may have graded it as annual assessment work to retain title, or to stimulate confidence among investors or buyers.

The site is difficult to date without archival information or temporal artifacts. Prospectors could have dug the pits and trench as early as 1859, but the shaft and road were probably made later. The 1870s and early 1880s are likely, as Chase Gulch experienced a wave of prospecting during this period.

Prospect Complex Condition and Integrity

The complex is mixed in condition. All features except for the shaft are well-preserved. The shaft was backfilled with its dump in 2010 and now manifests as a blotch of waste rock lacking original form. The site is also becoming overgrown with third-growth ponderosa pines.

The complex has marginal integrity. The series of pits reflect an organized, planned sampling strategy, which is a design of sorts. But without buildings, structures, or a complete feature assemblage, the site has no integrity of materials, workmanship, or association. The site does have some feeling of prospecting, and is in a setting evocative of prospecting.

Prospect Complex Significance

The prospect complex is not a contributing element of the landscape, and is recommended ineligible. The complex does not contribute because the site has almost no presence, its features being small, concealed by trees and brush, and thus difficult to discern.

In terms of eligibility, the site does not qualify under Criteria A and B because the site's name and timeframe cannot be determined through archival research and dateable artifacts. Name and timeframe are necessary to determine important events, trends, and people. Under Criterion C, the site is not a good example of the prospect complex resource type. The feature assemblage is too simple to clearly convey prospecting strategy and methods, and closure of the shaft compromised integrity. Further, the site is among Colorado's more common mining resources, and better examples exist elsewhere in Chase Gulch. The site will also not yield meaningful information upon further study because it lacks buried archaeological deposits, complex feature systems, and a substantial artifact assemblage.

Prospect Complex Management Recommendations

No further consideration is warranted because the site does not contribute to the landscape and is recommended ineligible. In terms of Section 106, the Land Disposal will have no effect.

Prospect Complex Heritage Tourism Potential: None

The site has no potential.

Site 5GL.2150 Oro Mine
Project: Basic Inventory

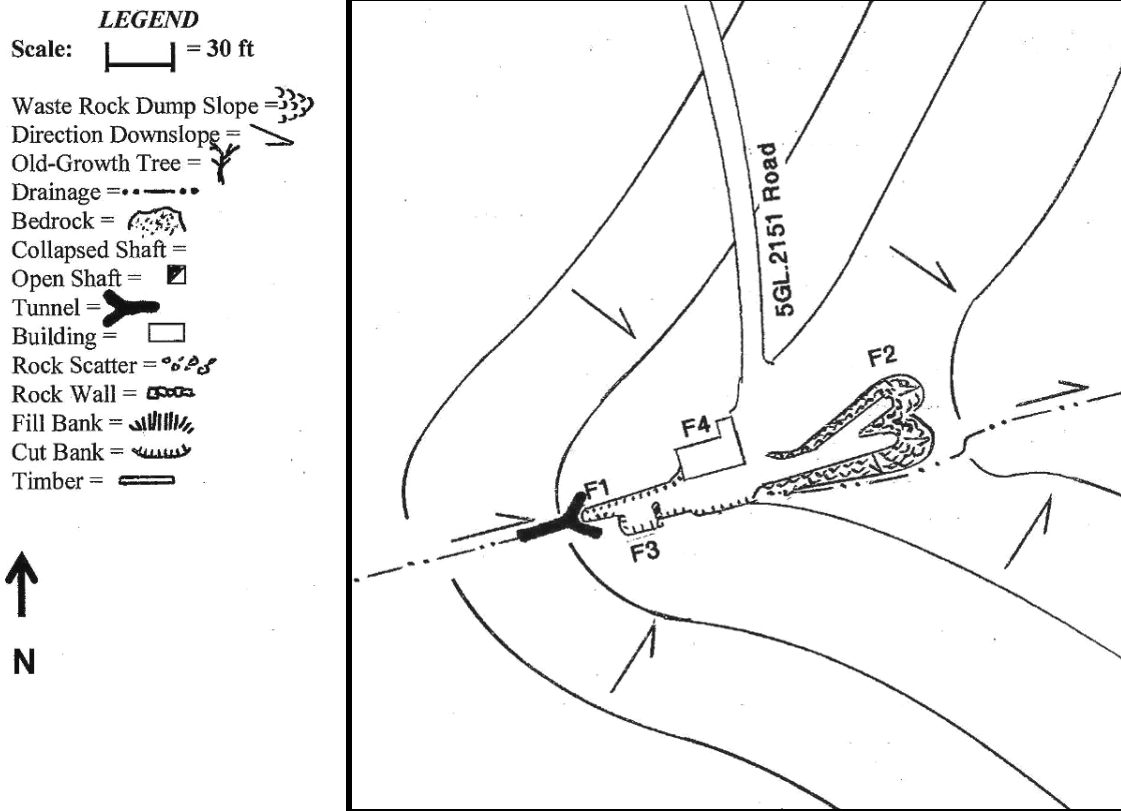


Figure 4.41: Plan view of the Oro Mine, 5GL.2150.

Oro Mine Description

The Oro was a relatively simple tunnel mine located above the Nelson Property in a seasonal drainage descending Negro Hill's east slope. The site includes archaeological features representing initial development during the 1870s, and a standing blacksmith shop from operations during the 1930s. Concealed by topography and aspen forest, the Oro contributes to the historic landscape on an immediate level, and is potentially eligible for the NRHP and SRHP.

When the property was initially developed, miners sited the tunnel (F1) on the floor of a seasonal gully with steep walls and thick soil. They first excavated a trench 12' wide and 42' long southwest to expose bedrock and then drove the tunnel into the headwall. The trench walls have since partially slumped and buried the portal, now marked by a water seep.

At one time a tunnel house stood over the trench mouth, enclosing the tunnel portal and a blacksmith shop. Workers graded a cut-and-fill platform (F3) 12'x20' in area for the frame building. A rock wall 3' high retained the fill-bank. The building was removed long ago, leaving only the platform and wall, both presently identifiable though overgrown with groundcover and blanketed with duff.

During the 1930s, the mine's last operator erected a vernacular, frame blacksmith shop

(F4) at the trench's mouth. The building still stands as a deteriorated but good example of a Great Depression-era shop. The building is 10'x24' in plan with a shed roofline 8' high at front (south) and 6' high at rear. The support system is simple, consisting of timber footers, 2"x6" posts joined by various cross-members, and 2"x6" rafters. The walls and roof are sided with 1" thick planks clad by ordinary and corrugated sheet iron. The interior had two rooms. The southwestern one was a storage and change room 10'x10' in plan, while the northeastern one was a shop 10'x14' in plan. A workbench is located along the southeast wall and a forge in the west corner. The roof has partially collapsed and the foundation has rotted, threatening stability.

Using ore cars on a track, miners from both time periods dumped waste rock in the drainage. They eventually deposited two lobes (F2) of material 40' wide, 78' long, and 10' thick. The dump retains its original surfaces, profile, and footprint.

The site has an impoverished artifact assemblage, primarily because the drainage floor provided a poor environment for the accumulation and preservation of items. Some structural materials and industrial artifacts are distributed around the standing shop where recent activity occurred. Industrial refuse is limited to coal, a bucket, barrel hoops, wire mesh, and antifreeze cans. A few sanitary food and coffee cans are scattered in the duff as well. The cans and heavy use of salvaged material in the shop reflect an age range spanning the 1930s.

Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which would have been thrown into the drainage and washed away. Further, the environment (a drainage floor) is not conducive to the accumulation of materials.

Oro Mine Condition and Integrity

The 1930s elements are fairly well preserved overall. The shop still stands and has identifiable blacksmithing appliances within and characteristic artifacts are scattered around it. The dump is likewise preserved with original footprint, profile, and top-surface that still features impressions from rail ties. The original tunnel house platform is, however, less clear, being blanketed with earth, ground-cover, and duff. The tunnel portal has completely collapsed and manifests as a subsidence area seeping water.

The resource possesses fair integrity relative to the 1930s operation. The waste rock dump, trench accessing the tunnel, and standing shop convey the surface plant's overall design. Further, the standing shop and its small-scale features within reflect design, materials, and workmanship of period mine buildings. The resource also has integrity of feeling, association, and setting.

Oro Mine Significance

The Oro Mine is potentially eligible under NRHP and SRHP Criteria A and C in the areas of Industry and Architecture. The Oro contributed to the Great Depression-era revival of gold mining in the area, and is a good example of a typical Depression tunnel mine.

The site also contributes to the landscape on a localized level. The dump and shop are visible from vantage points upslope and west, and when traversing Oro Mine Wagon Road (5GL.2151), a present day hiking trail. Thick aspen forest and location in the drainage conceal the site from other perspectives.

Oro Mine Management Recommendations

- Intensive site documentation and research. Includes official significance evaluation.
- Stabilize the shop building using compatible materials. Clean out interior. Improve upslope drainage. New foundation, new rafters and salvaged corrugated sheet iron for roof, and tighten or repair wall framing. New windows and custom plank door. Repair workbench, rebuild forge, install anvil block.
- Thin vegetation around shop and on dump. Stumps to grade
- Interpretive signs explaining site history, role of blacksmithing, how blacksmithing was done.

Oro Mine Heritage Tourism Potential: High

Interpretive Signage. The site has high interpretive and education potential. The shop is a good example of mining architecture and can illustrate blacksmithing and its fundamental role. Emphasize mining at Black Hawk during the Great Depression, new information rarely discussed through interpretation.

Interpretive Loop Trail. The site is also a natural stop on a proposed interpretive loop trail. The route begins at the Robert Ingersoll Placer (5GL.2162), south of Nelson Property. The placer mine is an interpretive stop. The trail continues west up Oro Mine Road (5GL.2151) to the Oro Mine. The trail then follows Oro Mine Pack Trail (5GL.2152) to Winnebago Hill summit, turns east (left) along a wagon road, and then descends north along the Robert Ingersoll Pipeline Bed (5GL.2161) back to the placer mine.

Linear Resource 5GL.2151 Oro Mine Road ***Project: Land Disposal***

Freight outfits hauled ore from the Oro Mine via a wagon road, which is still discernable in the landscape. The road begins at the mine (5GL.2150), 8,650' elevation, descends steeply east down into Chase Gulch, and ties into the area's greater network. The stope is extremely steep and southeast-facing with a fringe environment of brush and ponderosa pines amid open meadow. The road's sharp curve from northwest to east lies on BLM land.

Oro Mine Road History

Archival research found little information on the Oro Mine and its road. Historically, the mine included a shaft sunk on the vein, and a tunnel driven to reach the shaft. Material evidence suggests that the tunnel was initially developed during the 1870s, and archival sources mention driving the tunnel in 1901. Material evidence also indicates that the tunnel was worked during the Great Depression. By association, the Oro road was in service during these times.⁴⁰

⁴⁰ *Denver Times* 11/24/01 p12 c4.

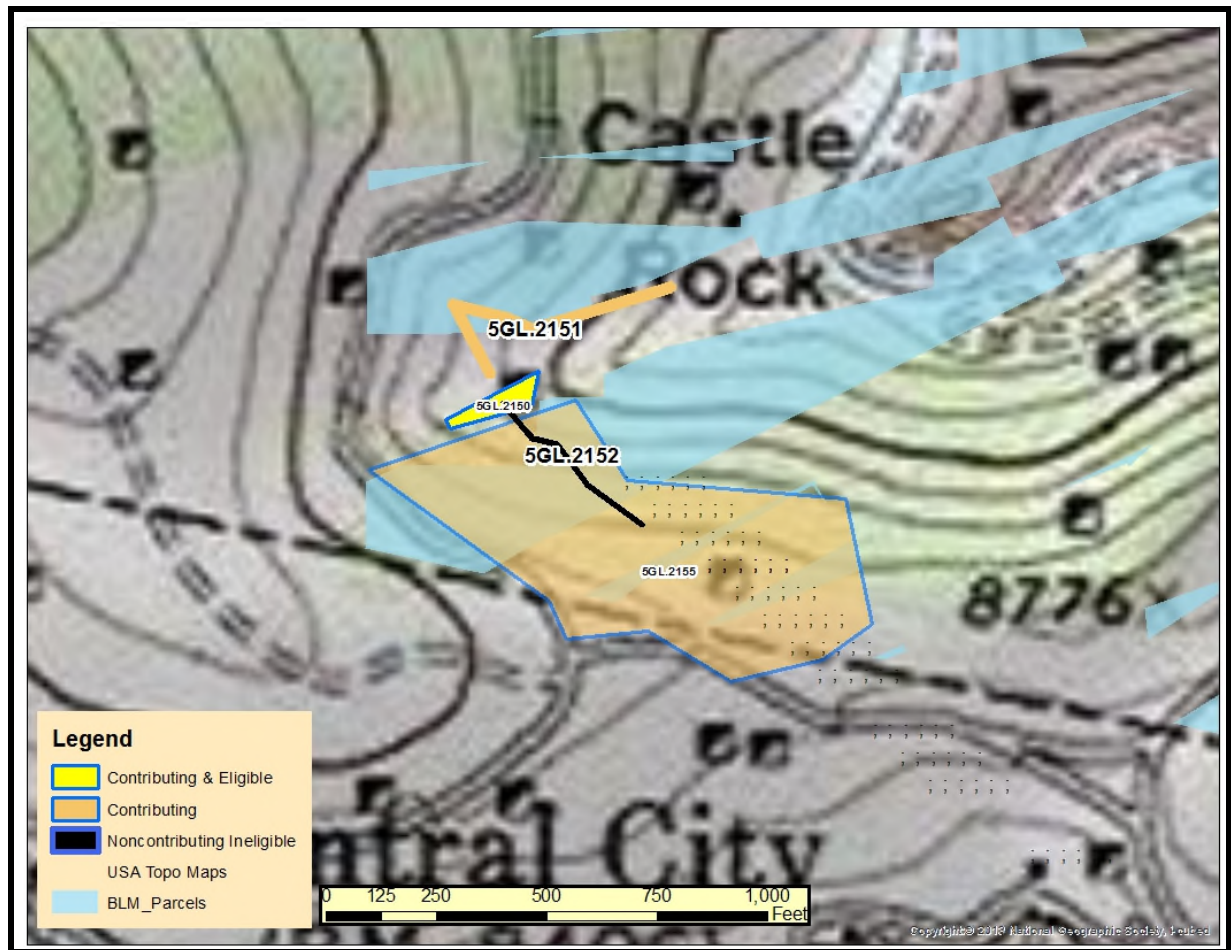


Figure 4.42: The enlarged topographic map illustrates the Oro Mine Road (5GL.2151), Oro Mine Pack Trail (5GL.2152), and Oro Mine (5GL.2150) in between. The large polygon is a Central City refuse dump (5GL.2155), shown for its relationship with the pack trail.

Oro Mine Road Description

The Oro road allowed freight wagons to deliver supplies to and haul ore from the Oro Mine. The road was designed to be fairly light in duty but intended for longevity, avoiding the drainage below where washout would eventually happen. The builders contoured the road 220' north from the mine to reach outside the drainage, and then turned east and descended 525' to Chase Gulch floor. The road can best be described in the two segments noted.

Segment 1 begins at the mine and ascends gently northwest for approximately 220' to a minor gully. The road then curves abruptly east and transitions into Segment 2. Workers originally graded the bed to a width of 7' with cut-and-fill methods, and ore-laden wagons gradually eroded it into a trough 8' wide and 18" deep. Teamsters threw cobbles off to the side when they became exposed, the cobbles now lying scattered along the sides of the road. The segment is distinct, though slightly overgrown with grass.

Segment 2 begins with a sharp curve in the seasonal drainage north of the mine. The road descends steeply east-southeast for 185' and then bends east-northeast. The tread is well-preserved, 7' wide, graded with cut-and-fill methods, and features numerous cobbles thrown

along the downslope edge. The road deteriorates in quality and descends a final 340' into the gulch. Erosion and thick vegetation reduced the tread to 6' wide and even erased short sections altogether. Around 400' from the initial curve, the road crosses a granite ledge and then becomes a faint and overgrown trace 3' wide, a fraction of its original 7' tread. The segment ends above the Robert Ingersoll Placer (5GL.2162). Hydraulic mining washed away the final connector to the actual gulch floor. A barrel hoop near the segment's start is the only artifact.

Oro Mine Road Interpretation

In route and construction, the builders designed the road to last. Quickly-made, inexpensive roads might have descended straight down the drainage from the mine, but this route was prone to washout. The builders graded the road to the north outside the drainage and then turned east and downslope. The bed was well-made with cut-and-fill methods to a width of 7', a standard for heavy wagons.

Oro Mine Road Condition and Integrity

The road is mixed in condition. Segment 1 is preserved, and although overgrown with grass, is clearly distinguishable as a roadbed. Segment 2's upper 400' are even more apparent, being a well-formed tread lined with loose cobbles. Thick, young aspens conceal some of the segment's sections. The road's lower 125' are mostly eroded away and difficult to discern.

The road possesses fair integrity. Design and association of the route as a service road for the Oro Mine are clear. The roadbed itself reflects design, materials, and workmanship. The better-preserved road sections offer some feeling of historic transportation, and the setting is excellent.

Oro Mine Road Significance

The road is significant as a contributing element of the landscape. Its overall route and some of the roadbed sections are clearly apparent from local vantage points, including the Oro Mine and bottom of Chase Gulch in particular.

The road is not recommended individually eligible for the NRHP because integrity is insufficient. Although the Oro Mine was important during the Great Depression, the road is not preserved well enough to convey its use during this time. The road may have even been abandoned because it was too steep for trucks, which were in common use by the Depression. The road thus does not qualify for Criterion A. In terms of Criterion B, archival research found no association with important people. Regarding Criterion C, the road is not a good example of its resource type: a wagon road. The main segment descending Negro Hill has been diminished by erosion, washout, and revegetation. Under Criterion D, the road will not yield important information upon further study. The road was not a segment in a greater network, and it lacks important features and artifacts.

Oro Mine Road Management Recommendations

In terms of Section 106, the road is a contributing element of the landscape, and its northwestern curve is superimposed over BLM land. The land's transferal from federal to local government constitutes an adverse effect, possibly requiring mitigation.

The road also has heritage tourism potential as a ready-made link in the proposed Oro Mine loop trail. To this end, a few improvements are suggested:

- Remove saplings from road tread.
- Clean surface of major obstructions.
- Reconstruct lower 125' into proper trail.

Oro Mine Road Heritage Tourism Potential: High

Interpretive Loop Trail. The road is a link in a proposed interpretive loop trail. The route begins at the Robert Ingersoll Placer (5GL.2162), south of Nelson Property. The placer mine is an interpretive stop. The trail continues west up Oro Mine Road (5GL.2151) to the Oro Mine (5GL.2150). The trail then follows Oro Mine Pack Trail (5GL.2152) to Winnebago Hill summit, turns east (left) along a wagon road, and then descends north along the Robert Ingersoll Pipeline Bed (5GL.2161) back to the placer mine.

Linear Resource 5GL.2152 Project: Land Disposal

Oro Mine Pack Trail

Miners commuted on foot to the Oro Mine (5GL.2150) from Central City, the nearest community, located south and on the other side of Winnebago Hill. They did so via a pack trail that began on the hill's summit and descended northwest. The summit section was destroyed during the 1870s or 1880s by prospecting, but the main segment can still be walked (see Figure 4.42 above). The southeast end at the complex is 8,770' elevation, the northwest end at the mine is 8,650' elevation, and the trail angles over an extremely steep, northeast-facing slope overgrown with dark doghair fir forest mostly on BLM land. The prospect complex mentioned above was not recorded because it is unrelated to the trail and located on private land. The trail does, however, cross another prospect complex nearer the mine recorded as 5GL.2156, and much of the trail's length passes through the extensive but disbursed Central City Dump (5GL.2155).

Oro Mine Pack Trail History

No information specific to the trail could be found except for portrayal on a 1917 topographic map. The trail's timeframe can be extrapolated from that for the Oro Mine. In general, the trail was developed during the 1870s along with the Oro, and was in use around 1900 when the tunnel was being driven.

Oro Mine Pack Trail Description

The trail can best be described in three segments ascending from the mine. Total length is 460'. *Segment 1* begins on the south edge of the Oro Mine site. For the first 70', the trail ascends southeast and appears to have been graded with cut-and-fill methods. The tread is 2½' wide, and its total width including cut and fill banks is 4'. Further along, the trail bends a little more easterly and contours with minor topography, still ascending gradually. The trail appears to have been created primarily by traffic rather than purposeful grading. Users moved large rocks aside as they became exhumed and dislodged, the tread thus winding between them. The trail reaches an extensive prospect complex (Site 5GL.2156) after 75' and becomes *Segment 2*.

For a distance of approximately 60', *Segment 2* ascends southeast through a prospect complex, passing by the mouth of a trench (F14 in 5GL.2156). Here, the trail wraps around waste rock cobbles thrown out of the trench mouth. Overall, the segment appears to have evolved from use rather than intentional routing, the tread being 2' wide and winding around rocks and topography.

The trail changes character where it leaves the prospect complex, becoming *Segment 3*. The trail resumes a steep southeast ascent for around 100', and then turns easterly. In these pitches, the trail was purposefully graded with cut-and-fill methods, large rocks being moved downslope to retain the shoulder. The tread is again 2½' wide and smooth with distinct cut-and-fill banks. After 190', the trail enters another prospect complex (unrecorded) and disappears, having been erased by excavations.

The trail lacks buried archaeological deposits or directly associated artifacts. A few cans, institutional food drums, and stove parts associated with the Central City Dump are scattered sparsely along its length.

Oro Mine Pack Trail Interpretation

The pack trail represents regular foot traffic between the Oro Mine and Central City, south of Winnebago Hill. Miners created the trail to shorten their one-quarter to one-half mile daily commute, sometimes leading pack animals loaded with supplies. Most of the trail was purposefully constructed with cut-and-fill methods, traffic packing the tread and smoothing it out. Prospect complexes at the trail's southeast end and near its center disrupted the route. Miners picked their way among the pits at the southeast end and walked around a trench dug through the trail in the center complex, foot traffic establishing a bypass.

The trail is a curious resource in that it raises several presently unanswerable questions. None of the other mines recorded for the Land Disposal had their own pack trails. Why was the Oro Mine different? Could the trail have been cut prior to the Oro's development, with the Oro coincidentally located at the northwest end? The trail could have served the nearby Gulnare Mine, worked during the 1860s, or the Robert Ingersoll Placer operated in the 1930s.

Oro Mine Pack Trail Condition and Integrity

The trail is in good condition although becoming overgrown with fir saplings in a few stretches. The route, tread, and cut- and fill-banks are distinct and preserved.

The trail retains good integrity. The original route is apparent, and arguably could qualify as a design of sorts. Integrity of workmanship is also exhibited in the of the trail's cut-and-fill

construction. Integrity of materials is not relevant because the trail never had buildings or structures. The trail passes through an intact setting with prospect complexes in thick forest, which convey feeling.

Oro Mine Pack Trail Significance

As a historic resource, the trail is not a distinct landscape element and has little individual significance. The trail has minimal visual presence (chiefly due to revegetation) and is difficult to detect unless one is walking on its better-developed segments.

As an individual resource, the trail is recommended ineligible. Under Criterion A, it was not a critical transportation route for the Oro, and its association with the Oro is questionable. In terms of Criterion B, archival research was unable to determine a direct link to important persons. Regarding Criterion C, the trail is a fairly common resource type, and is not an outstanding example of that time. The trail is unlikely to yield important information because it lacks buried deposits, complex feature systems, and was not a segment in a greater network.

Oro Mine Pack Trail Management Recommendations

In terms of Section 106, most of the trail is on BLM land. But with the trail not contributing to the landscape and individually ineligible, the Land Disposal will have no effect.

The trail has heritage tourism potential as a ready-made link in the proposed Oro Mine loop. To this end, a few improvements are suggested:

- Remove saplings from tread.
- Reconstruct the tread through the prospect complex at the southeast end, and at the Oro Mine (5GL.2150).
- Improve the tread through the center prospect complex (5GL.2156). Carefully avoid the complex's pits and trenches. Archaeological supervision may be required.

Oro Mine Pack Trail Heritage Tourism Potential: High

Interpretive Loop Trail. The pack trail is a link in a proposed interpretive loop trail described with the Oro Mine Road (5GL.2151) above.

Site 5GL.2153 Nelson Property
Project: Land Disposal

Named after a family, the Nelson Property is a relatively recent residential complex based around a historic house. The complex includes a leveled earthen pad, two sheds, a privy, and deck less than 50 years old, and a house built in 1872 but relocated several decades ago. The Nelson Property was inventoried for the Land Disposal because the house is older than 50 years, even though it was moved from elsewhere, and the site's north and south ends overlap BLM land. The site is on Chase Gulch's floor opposite and west of Castle Rock. Quartz Creek trickles past the site, and the surrounding environment is open meadow and stands of aspen trees. Negro Hill rises steeply to the west, and is overgrown with ponderosa pines and more aspens. A stamp mill foundation (5GL.2154) is along the creek to the east, and Robert Ingersoll Placer (5GL.2162) is a short distance south.

Nelson Property History

The Nelson Property was a part-time residential complex developed on patented mining claims in Chase Gulch well outside of Black Hawk and Central City. The property's development and improvement thus fell within Gilpin County's supervisory jurisdiction, but occurred during a time when little attention was paid to such projects. Information about the site is thin, derived from a Gilpin County Assessor file and informal interviews with several long-term Black Hawk residents who knew of the Nelsons.

The assessor file indicates that the house presently on-site was built in 1872. Long-term residents claim that the house was moved to its present location during the late 1960s or 1970s, with the sheds and privy added over time. In 2007, the City of Black Hawk purchased the property from George and Betty Nelson, likely the original developers. The Nelsons lived on-site part-time during the 1980s and 1990s, and sold to the city because their heirs were not interested in residing there or maintaining the property. No one recalls how or where the house was moved from, whether it was disassembled or carried intact via truck, but it was placed on an impermanent foundation over a bulldozed pad.

Nelson Property Description

The Nelson Property was a residential complex cobbled together during the late 1960s or early 1970s on a pad flattened with a bulldozer. The Nelsons redeveloped the Gulnare Tunnel site, using its waste rock dump as a basement for the pad. At one time the Gulnare was a minor operation, its tunnel extending due west and intersecting a shaft around 100' up the hillside. The waste rock dump had been a small flat area, which the Nelsons expanded in all directions, erasing all traces of the tunnel. Their pad became 75'x150' in area, with a south extension 18' wide and 45' long, and a north extension 15' wide and 54' in area. The site's access road descends to the northeast and joins present-day Chase Gulch Road on Quartz Creek's northeast side.

The Nelsons improved the pad's southern half for their house and the northern half as a parking area. For the residence, the Nelsons relocated an 1872 house (F1) from elsewhere and then modified it. As built, the house was side-gabled, story-and-one-half, 23½'x30½' in plan, 12½' high at the roof eaves, and 19' at the gable peak. In moving the house, workers apparently disassembled it and rebuilt it on-site over a foundation of rocks and cinderblocks arranged

around a shallow cellar pit. The house was oriented east-west in length, with what was the historic front facing south.

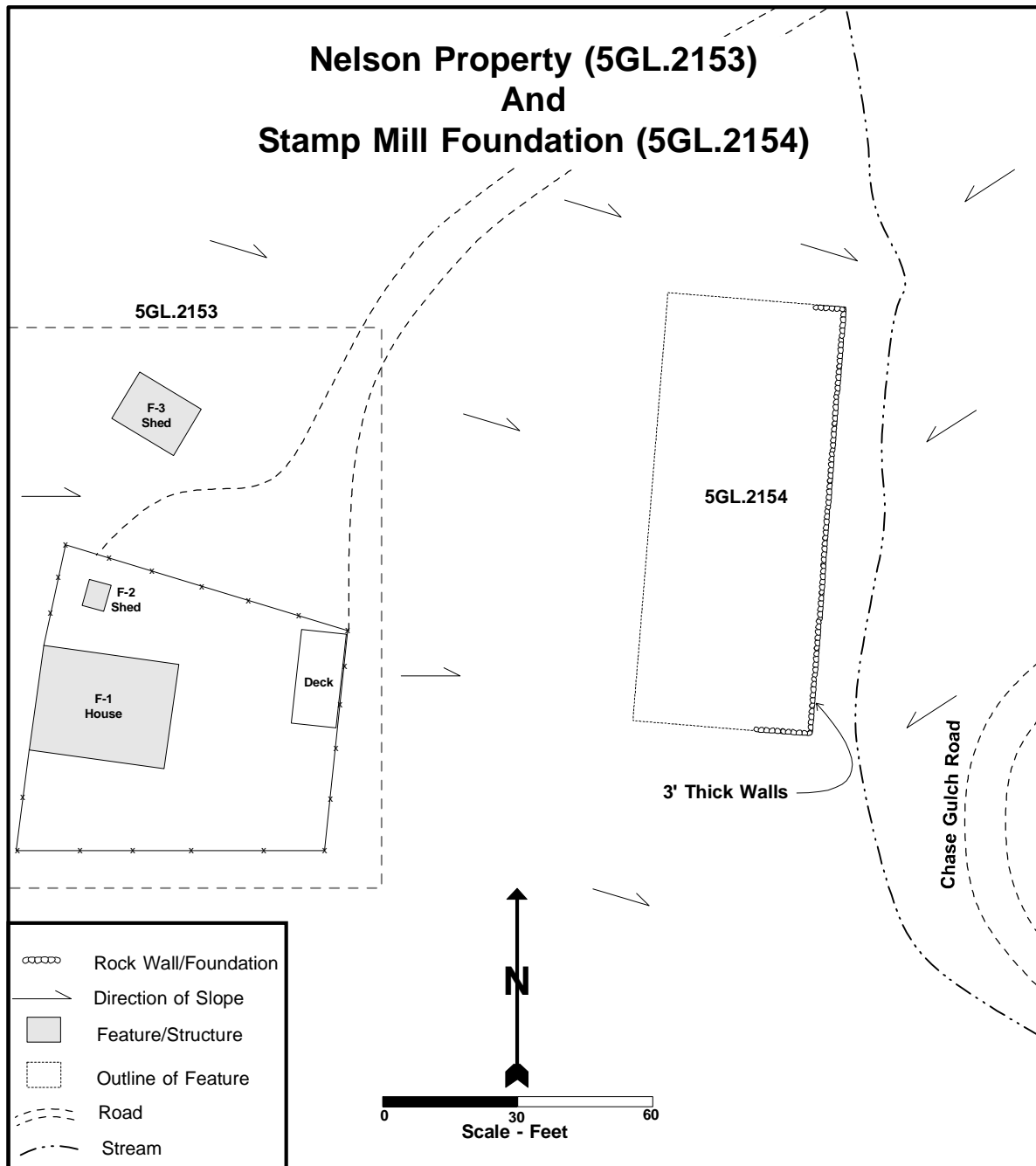


Figure 4.43: Plan view of Nelson Property (5GL.2153) and Stamp Mill Foundation (5GL.2154) on Chase Gulch floor. Castle Rock pinnacle is off the map's right edge.

Abandonment of the side-gable floorplan was one of the principal alterations. The Nelsons converted the east side into the front by cutting a new doorway. They left the historic doorway in the south side as a second exit and replaced the original symmetrically-opposed

windows with squat aluminum units. Although the Nelsons filled gaps in the window frames with boards, they left the original historic Grecian pediments. The house's east side originally had four double-hung windows also with Grecian pediments. The Nelsons installed smaller aluminum windows and filled in the gaps, as well. In the west and north sides, they also cut entirely new openings for windows and a door.

Some of the original clapboard siding was left on the walls, while other sections were replaced. Most of the north side was refitted with old siding very similar to the original, but different nonetheless. Half the front (east) was replaced with more recent material.

Last, they constructed a deck on the east side, and a stairway and landing on the west side for the second-story entry. Overall, the house no longer retains integrity of location, design, appearance, or materials.

Shortly after relocating the house, the Nelsons arranged a yard 80'x80' in area emphasizing outdoor use. They stationed a picnic bench and swing-sets around the east side, and erected an overlook deck. A steel shed (F2) provided tool storage. Exhumed stumps, obsolete agricultural equipment, and machine parts were haphazardly arranged around the yard for ambiance, fenced with wire mesh in recent years.

The parking area was left largely open, but the Nelsons graded a platform at the northwest corner for a ribbed steel storage shed (F3). Because the house lacked a bathroom, they also installed a privy next to the shed. At first glance the privy appears to be historic, but actually consists of weathered planks nailed to a frame of planed 2"x4" members on cinderblocks. The Nelsons also collected weathered lumber for construction and stacked it next to the privy.

In the meadow below and northeast of the bulldozed pad, the Nelsons gathered more obsolete agricultural, machine, and mining pieces. All came from elsewhere. The Nelsons were tidy and careful to dispose of rubbish properly. Relatively little refuse is scattered about. A few pieces of lumber, cinderblock fragments, and iron are distributed in the grass around the site, and tableware, window glass, and colorless and amber glass fragments are sprinkled on the parking area and in the grass. Buried archaeological deposits are absent.

Nelson Property Condition and Integrity

The Nelson Property is in fair condition when perceived for what it is: a forty-year-old residential complex. The house, decks, sheds, and assemblage of salvaged equipment pieces are preserved. The house is in poor condition as a historic resource, having been relocated and heavily modified in floorplan and materials. The house does, however, retain its original roofline and rectangular footprint.

The house is the site's only historic feature, and it retains poor integrity. Relocation from elsewhere negated integrity of location, while changing the floorplan affected design. Replacement of siding and windows compromised materials, and the out-of-context agricultural equipment and mining items, along with the recent decks, compromising feeling and setting.

Nelson Property Significance

The Nelson Property's contribution to the landscape is questionable. Although lacking integrity of location, the house does add architectural detail to the landscape, reminiscent of period buildings in the area. But the collection of agricultural and mining equipment is out of place and detracts from the landscape's feeling.

The property is individually ineligible because it was developed during the last 50 years and does not qualify as historic.

Nelson Property Management Recommendations

The Land Disposal will have no effect because the site is not historic. The site also has no heritage tourism potential.

Site 5GL.2154 Stamp Mill Foundation ***Project: Land Disposal***

A foundation for an early 1860s stamp mill fronts Quartz Creek, in Chase Gulch's west end. The resource is simple, consisting of an earthen pad retained by a stout rock wall (see Figure 4.43 above). The gulch's west end is open and broad, with Quartz Creek trickling through a depressed channel lined with riparian habitat and stands of young aspens. The gulch's flat floor flanks the creek, and the west side is open meadow. Elevation is 8,540'. Historic Chase Gulch Road (5GL.2126.1) passes along the foundation's west side, and the circa 1970 Nelson Property residential complex (5GL.2153) is farther west. During the 1970s, the Nelsons collected and parked obsolete agricultural and mining equipment around the platform's north end.

Stamp Mill Foundation History

Intensive archival research found no information specific to the stamp mill foundation discussed here. But a brief overview of the Central City district's early milling history provides context for understanding the resource and placing it in time.

The Gregory gold rush of 1859 drew both inexperienced would-be placer miners and prospectors seasoned in the young hardrock mining industries of California and Georgia. The experienced miners were the ones who initially searched for and discovered hardrock gold veins, and introduced crushing and mercury amalgamation to recover gold from its quartz gangue (vein fill-material). Open-air arrastras, with their circular stone floors, were the first mills, a few being constructed in Gregory Gulch and on the North Fork of Clear Creek in 1859. But the seasoned miners brought with them the hardware necessary for faster stamp mills.

In overview, the earliest stamp mills were simple, featuring of a stamp battery, amalgamation tables, and a motive source enclosed in a building. Workers at the mill's head broke crude ore into small cobbles and shoveled them into the stamp battery, which pounded the material into a slurry. A stamp battery consisted of a timber gallows frame with guides for heavy iron rods fitted with cylindrical iron shoes. A camshaft, powered by a large belt, lifted the rods in sequence and let them drop. The shoes pulverized the ore in cast iron battery boxes bolted to timber pedestals, some supported by heavy rock foundations and others sunk into the ground for stability. After screening, the slurry washed over amalgamating tables at the battery's toe. A mercury coating on the tables amalgamated with the gold, and the spent tailings flowed into a trough and continued out of the mill. Workers periodically scraped off the amalgam and heated the mass in a retort, which volatilized the mercury and left impure gold that had to be refined

elsewhere. During the 1860s, batteries came from manufacturers in sets of two, three, and five stamps, the latter being the most common. Except for the battery boxes, the stamps and amalgamation tables rested on heavy timber footers laid on packed earth or rock alignments, while the buildings stood on lighter wooden foundations.

Charles Giles built the first stamp mill at the mouth of Chase Gulch in 1859. His was water-powered and hand-made of wood, the stamp shoes shod with iron. T.T. Prosser erected the first factory-made unit, a three stamp battery in Prosser Gulch near Central City. Lee, Judd, & Lee constructed the Black Hawk Mill, the town's namesake, near the mouth of Gregory Gulch in 1860. These and few other stamp mills proved fairly effective on the easily treated, friable quartz ore, setting precedent for others to follow. Milling seemed simple and a sure way to make money, so a number of parties returned East for equipment and imitated the successful facilities. By the end of 1860, sixty small mills had been completed, mostly along permanent streams including in Chase, Gregory, Prosser, and Nevada gulches. All the mills required water for processing, and many were also powered by waterwheels fed by ditches and flumes. The use of steam was unusual due to the great cost of importing engines and boilers. Chase, lower Gregory, and Black Hawk saw the most mills because of their favorable conditions.⁴¹

Problems beset the milling industry from the beginning. Their number was out of proportion with producing mines. Some were built by mining companies specifically for their operations, and thus received steady streams of ore. Most, however, were independent enterprises competing for limited ore, which they frequently could not secure. Inexperience and mismanagement was another issue, with insufficient water power almost as bad. The independent mill outfits began failing as early as 1862, sometimes bought and sold several times over.

The milling industry collapsed in 1863 and 1864, and nearly all facilities stopped running. The problems noted above at first winnowed out the independent mills, leaving primarily the effective and better managed plants. But then, a district-wide change in ore character with depth forced even these to suspend operations. Amalgamation mills were only effective on relatively simple, easily crushed gold ore. Between 100' to 200' underground, the ore transitioned into a refractory material that would not amalgamate, rendering the stamp mills useless. Only a handful of company plants in Black Hawk and Nevadaville continued operations, and were fed with ore gleaned from the richest gold veins. The dozens of others were abandoned or dismantled.

Stamp mills returned to service around 1870 as experienced metallurgists puzzled out new ways to treat the complex ore. The second-generation mills were different in two fundamental respects from their predecessors. In addition to stamp batteries and amalgamation tables, they now included concentration machinery to separate out the complex gold compounds that would not amalgamate. The machinery was located on terraces lower in elevation than the tables. The second-generation mills were also much larger to include more batteries of stamps, the concentration appliances, and steam power. The simple water-powered mills were history.

⁴¹ Cushman and Waterman, 1876:21, 23; Hall, V.2 1891:407; Hollister, 1868:110; Kemp, 1949:119.



Figure 4.44: The 1860s photo depicts cabins and stamp mills lining the North Fork of Clear Creek, Black Hawk. The largest buildings at left and center-background with smokestacks are stamp mills with steam power. The mill discussed above was similar. Denver Public Library X-2034.



Figure 4.45: The view depicts two stamp mills, center and left, in lower Chase Gulch, 1861. The two other buildings in center-background and far right are log cabins. The stamp mills are deceiving in appearance, being simple and rectangular with low roofs. Denver Public Library X-2002.

Stamp Mill Foundation Description

The stamp mill foundation is a simple resource consisting of two components: a rectangular platform, and a well-made rock retaining wall built outward into Quartz Creek's channel. The platform is flat, earthen, 40'x96' in area, and aligned almost north-south with the creek channel. A 1' to 2' thick veneer of soil blankets the surface, which is now totally overgrown with thick, lush grass. The soil and grass conceal any mill footprint, machine foundations, and artifacts except for a barrel hoop. More grass surrounding the platform could hide small-scale features and additional artifacts.

The wall fronts the creek and is 8' high, 3' thick, 96' long, with returns 14' and 8' long. Workers constructed it by carefully fitting together boulders and large tabular cobbles, some mortared with mud and sand. A 12' section fell out from the face decades ago, and another 12' section in 2013. The collapse scars reveal the platform's interior fill content, consisting of cobbles, boulders, and soil. Many of the crown rocks have either loosened or fallen away. Important buried archaeological features and artifacts are likely underneath the soil and grass. Their investigation may reveal significant information regarding the foundation.

Stamp Mill Foundation Interpretation

Deductive reasoning demonstrates that the foundation belonged to an early 1860s stamp mill. First, the footprint and size correspond to Gilpin County's early 1860s stamp mills as observed in a survey of historic photos at Denver Public Library (see Figures 4.44 and 4.45). Another period stamp mill site (5GL.2167) a short distance down the gulch is also of a similar form. Second, the foundation is in Chase Gulch, a known center of milling. Third, the wall is substantial and intended to bear weight, its 3' thickness and well-made construction reflecting industry rather than pastoral or residential use. Rock walls for residences are thinner and poorer in quality. Last, the foundation was purposefully built outward into the stream channel, indicating interaction with the stream. The use of waterpower for machinery is the logical explanation. The foundation's footprint, size, flat surface, and precipitous sides rule out a sawmill, the only other type of water-powered facility built in the area besides stamp mills.

Stamp Mill Foundation Condition and Integrity

The foundation is in fair condition but is threatened with rapid deterioration. The platform is blanketed with soil and thick grass, completely concealing its surface. Most of the wall stands, but a 12' section calved off decades ago and another 12' section in 2013. The recent collapse weakened adjacent but intact segments, which now lean outward and will topple in the near future without stabilization.

As a mill foundation, the resource retains limited integrity. Without distinguishable feature or artifact assemblages, the foundation lacks integrity of design and association, being difficult to date with absolute certainty. The wall retains integrity of materials and workmanship, and the streamside setting is good.

Stamp Mill Foundation Significance

The foundation is significant in two ways. First, it is a contributing element of the landscape, the rock wall and its streamside setting adding small-scale detail and feeling of industry-now-gone.

Second, the foundation is recommended individually eligible under NRHP Criterion D and SRHP Criterion E. Presently, the wall and platform exhibit no expression of the mill itself because sod and soil coverage are too thick. Testing or excavation guided by a ground-penetrating radar survey will likely fill data gaps, revealing the building footprint, location of stamp battery footers, and other buried features. Their analysis will probably enhance the current understanding of early 1860s stamp mills, a poorly understood but important research area. Little is currently known because period stamp mill sites are rare, and even fewer have been studied. And yet, stamp mills were critical to the success of Colorado mining in its first years.

Stamp Mill Foundation Management Recommendations

In terms of Section 106, most of the stamp mill foundation lies on BLM land. The resource is a contributing element of the landscape and is recommended individually eligible. Disposal of the BLM tract to local government constitutes an adverse effect, potentially requiring mitigation.

The foundation has little heritage tourism value in its current condition. The resource appears as little more than an overgrown earthen pad and rock retaining wall, and it thus difficult to interpret. But, investigation of the foundation's buried features has great potential for both tourism and contributions in Black Hawk's history. To make the foundation meaningful:

- Conduct a Ground-Penetrating Radar survey. GPR has the ability to identify and outline buried features such as the building footprint and machinery locations.
- Test or excavate any features offering interpretive potential.
- Promote archaeological investigations as a publicity campaign.
- Stabilize rock walls.

Stamp Mill Foundation Tourism Potential: Medium

The foundation has minimal potential as is. But, archaeological investigation will be fascinating to the public and can be made an important on-going event.

Site 5GL.2155 Central City Dump
Project: Land Disposal

From the 1870s through the 1910s, households and commercial businesses in Central City's northern neighborhoods used the crest of Winnebago Hill as a refuse dump. At the time, the area was unused, open ground with a few mines and abandoned prospects well removed from city streets. Residents shuttled household and light commercial rubbish up in wagons and threw it directly on the ground along wagon roads. Presently, several broad artifact scatters remain. One discussed here begins on the hill's west crest and descends downslope and north. Residents traveled G Street to reach the dump. G Street begins in Central City's west end, ascends northeast to the hill crest, and then descends gently southeast back into the city. On the crest, the street meets Quartz Valley Road, contouring northerly into Quartz Valley. Both roads are still in use, and their intersection was the main dumping point. The crest is broad, rounded, 8,700' elevation, and features open meadow. The refuse continues downslope through young aspen groves and into thick ponderosa and fir forest. The dump's northwest half is superimposed over a BLM land tract.

Central City Dump History

No archival information could be found regarding the dump. Without documentation, the dump's history can only be generalized to point that it came from Central City, whose principal period of occupation spanned 1868 through 1918.

Central City Dump Description

Central City residents and businesses dumped a wide variety of household and light commercial refuse on Winnebago Hill's west crest. Over time, they deposited a scatter of artifacts approximately 440'x1,015' in area. The two roads, topography, and vegetation

influenced where the residents dumped their refuse, in turn manifesting in today's artifact distribution. Households dumped domestic refuse including broken bottles, tableware fragments, crockery, kitchen scraps, a variety of cans, and light hardware to the open, flat ridge crest on G Street's north side. The intersection with Quartz Valley Road was a focal point and received the most rubbish, but residents also deposited domestic refuse far to the east. The material took its present form as a blanket of small and finely fragmented items decreasing in density and variety from west to east. Most artifacts remained on the surface, but several concentrations of bottle glass, tableware, decayed food cans, and clothing hardware in a matrix of stove ash became 15 centimeters (cm) thick. Nearly all have been probed by bottle collectors.

The residents made an effort to throw mixed domestic and light commercial waste farther down the ridge crest's shoulder. In addition to the above, the content included more food cans, structural debris, and hardware used by contract miners such as lunchpails and dynamite thawing boxes. The mixed waste also featured commercial and institutional food containers, tins, cans, and bottles. Subject to repeated use, the deposit is as much as 20 cm thick near the ridge top, decreasing in depth, concentration, and variety from west to east, and from the crest to around 50' downslope. Residents dumped loads of large items north and downslope from the intersection where trees concealed both the act of dumping and the refuse itself. Finely fragmented domestic items, mostly bottle glass and tableware, remained along the roadside, while large objects migrated downslope. Items with surface area and rounded shapes such as cans, bulk food tins, tubs, and even a cookstove rolled far downslope, stopped either by trees, prospect pits, or rock outcrops. The scatter lacks depth, although some items became partially buried by duff.

Central City Dump Interpretation

The site is a typical mining town dump. Residents and businesses used wagons to cart their rubbish to open land on the outskirts for disposal. Artifact distribution suggests some differentiation between households and businesses. Households brought relatively small batches of waste and freely left them along the roadside, but making some effort to concentrate greater amounts north and over the hill crest. Businesses, in contrast, delivered larger loads of big items and apparently backed their wagons into the forest for discharge. The individuals may have attempted some secrecy while also trying to minimize unsightliness. The dump was not Central City's main repository and instead was among many similar disposal sites encircling the town. Relative to the volume of refuse that neighborhoods can generate, the dump was not particularly large or concentrated.

The artifact assemblage reflects a wide range of users. Machine and mill appliance parts, sheet metal water tanks, tar drums, and hardware were left by industrial businesses. Food service businesses dumped institutional containers, canisters, hole-in-cap cans, butter crocks, hotelware dishes, vegetable steamers, and even a cookstove. Independent miners threw out carbide drums, dynamite thawing boxes, and lunchpails. Sea-green beer and Gordon's gin bottle bases also indicate that some of the residents were British.

Dateable artifacts reflect sustained use from the 1870s through 1910s. Applied bottle finishes, crude beer bottle bases, and a variety of cans assembled with lapped side-seams date to the 1870s and 1880s. Hole-in-cap cans assembled with inner-rolled and soldered side-seams, semi-automatic bottle finishes, and double vent-hole milk cans reflect the 1890s and early 1900s. Vent-hole cans, sanitary food cans embossed with Sanitary, amethyst machine-made bottle fragments, key-wind coffee cans, and carbide drums remain from the early 1900s and 1910s.



Figure 4.46: The large polygon at center on the topographic map enlargement (1:3,000 scale) is a GIS shape file illustrating Central City Dump's location and outline. The elongated blue wedges are BLM land tracts. The other polygons are mines superimposed over or adjacent to the dump. The yellow and black lines are linear resources.

Central City Dump Condition and Integrity

The dump is in fairly good condition and offers a rich artifact assemblage distributed over a broad area. High-volume and light-weight artifacts have, however, shifted downslope from their origin points. Bottle collectors have also picked through the area, removing whole bottles and artifacts of interest. Otherwise, the land has seen little disturbance and no alternative use.

The dump retains good integrity in a few areas. Many individual artifacts are in or near their original locations. The refuse is scattered throughout a quality setting of meadow, forest, prospects, and small mines typical of mining town fringes. The dump also retains association with Central City in timeframe and location. Other areas of integrity may not be relevant. Unplanned, used as needed, and organic in evolution, the dump never had a formal design. Without buildings, structures, or other constructs, the dump also had no materials or workmanship.

Central City Dump Significance

The Central City Dump is a contributing element of the historic landscape. With a fairly high volume of refuse, the dump's upper swath on Winnebago Hill is visible from G Street and Quartz Valley Road. Thousands of amethyst, aqua, and amber glass fragments, pieces of tableware, and hardware litter the area and form a noticeable whole. Most large items are scattered downslope and in forest among prospects, mines, a water ditch, and pack trail. The objects are readily apparent with traversing the area and especially the ditch and trail. Altogether, the large artifacts are important small-scale details contributing to the area's feeling, setting, and association with mining.

Individually, the dump is recommended ineligible for the NRHP and SRHP. In terms of *Criterion A*, the dump was relatively unimportant and cannot be directly tied to significant events and trends. The dump does not qualify under *Criterion B* because significant individuals were almost certainly not present on-site for sustained time. In general, important people rarely frequented dumps. In terms of *Criterion C*, the site is not a particularly good example of its resource type, a community refuse dump, because it lacks cohesiveness. The artifacts tend to be disbursed and nowhere form dense deposits. Regarding *Criterion D*, the site is unlikely to yield important information upon further study. The principal reason is that the dump is removed from the source and was used intermittently for at least three decades, circa 1870s refuse being mixed with, and often indistinct from, circa 1910s materials. As a result, artifact concentrations and the artifacts themselves are impossible to tie to specific individuals, households, businesses, or narrow timeframes. Context necessary to realize meaning from the materials is absent.

Central City Dump Management Recommendations

In terms of Section 106, the dump's north half extends onto BLM land, and the dump is a contributing element of the landscape. Transfer of the tract from federal to local government will have an adverse effect, and mitigation may be required.

The dump has low heritage tourism potential, and no actions are suggested.

Site 5GL.2156 Prospect Complex
Project: Land Disposal

Sometime during the 1860s or 1870s, a prospecting party invested great effort searching for a gold vein on Negro Hill's northeast flank. They dug an extensive assemblage of pits and trenches with no clear pattern, and little if any success. The prospect complex, the resource type, is 8,650' elevation on a very steep northeast-facing slope blanketed in a dark second-growth fir forest. The Central City Dump (5GL.2155) surrounds the site.

Prospect Complex History

The site's name could not be determined, and a name is necessary for research and a history. The Oro and Iowa claims are, however, located immediately north, and both were prospected during the 1870s. The site was probably created at the same time.

Prospect Complex Description

The prospecting party dug several different groups of workings in search of a vein, followed by sampling it at depth. The initial search appears to have started near the site's center. The prospectors dug a series of six prospect pits and trenches (F7-F13) in pairs oriented roughly east-southeast, not by coincidence the same direction as the area's mineralized veins. The pits range in size from 6'x7' in area and 2½' deep (F10) to 13' in diameter and 3' deep (F12). The trenches are cross-cut excavations, one being 6' wide and 18' long (F7), and the other 9' wide, 40' long, and 5' deep (F8). The prospectors bored a short adit underground from the end of F8, the portal having completely collapsed. All the excavations reflect age and weathering, their floors blanketed with erosional sediment and thick duff.

Feature Type: Cross-Cut

A cross-cut was a prospecting method for sampling a maximum swath of ground with minimal effort. Veins in the area trended northeast-southwest. A crosscut trench or adit was oriented 90 degrees, or cutting across, ground where veins may be.

The prospectors made a second search downslope, digging another cluster of workings. They shoveled a pit and two trenches (F3-F6) that appear to be poorly organized and uncertain in orientation. The largest trench (F7) is 7' wide at the mouth, 17' wide upslope, 36' long, and 5' deep. The pit (F4) is 18'x24' in area and 4' deep, and made contact with the sought-after mineral formation.

The prospect party traced the vein downslope and northeast, and drove an adit (F1) to sample it at depth. They excavated a short trench for the portal and lined the opening with a dry-laid rock wall in support. They bored the adit west-southwest and used wheelbarrows to dump waste rock downslope, building up a bench-like mound (F2) 29'x44' in area and 5' thick. The adit has since collapsed and is now a linear subsidence zone 66' long with the rock wall intact, while the dump is preserved but totally overgrown with young fir

trees. The above-mentioned pit and trenches are partially filled with sediment and duff.

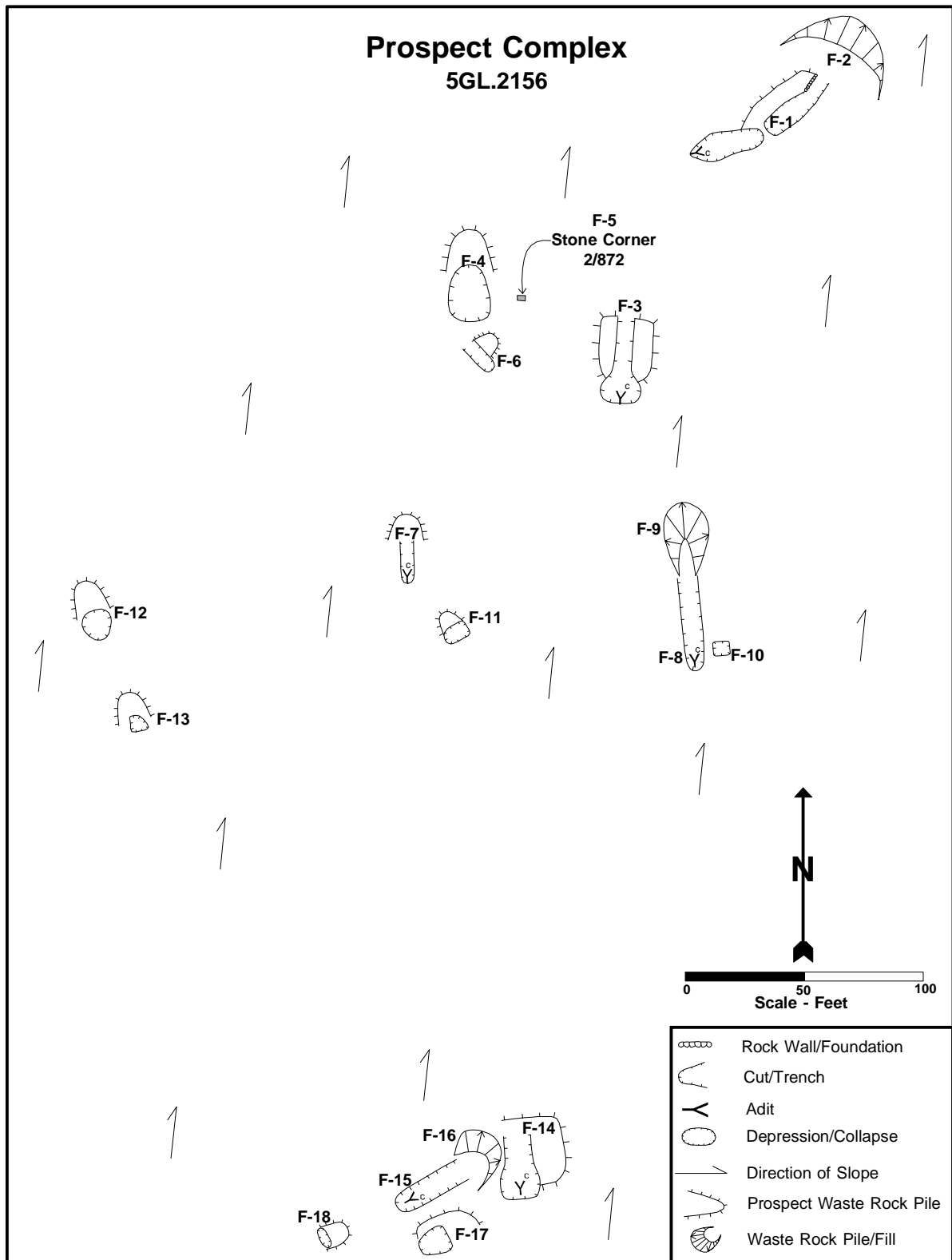


Figure 4.47: Plan view of Prospect Complex, 5GL.2156.

The prospect party may have created the third group of workings (F14-F18) in search for a different vein upslope and south. The prospectors first dug a trench and two pits with no clear alignment. The trench (F14) is 12' wide and 27' long, and the pits are 12' in diameter and 4'x6' in area (F17, F18). Probing the vein at some depth, the prospectors drove a short adit (F15) southwest. They dug a northeast-southwest trench 6' wide and 32' long to clear off soil, and then dipped down and southwest into the vein. With wheelbarrows, the prospectors dumped waste rock at the mouth, depositing a pad (F16) 19'x24' in area and 4' thick.

The site offers only a handful of directly attributable artifacts, while historic rubbish making up the Central City Dump (5GL.2155) is scattered around, some objects lying in the largest pits. The artifact assemblage is limited to a handful of cut nails on the main adit's waste rock dump (F2). More could be associated but are concealed by thick duff and soil creep.

The site lacks buried archaeological deposits. Privy pits are absent, surface prospecting tended not to generate materials in volume, and Negro Hill's steep slopes provide a poor deposition environment.

Prospect Complex Interpretation

The site is a typical complex in which a prospecting party made great effort to find a mineralized vein they thought offered gold. The prospectors apparently unearthed something of interest in one of the larger pits (F4) in the site's northern area, and drove an adit (F1) to sample the ground below in confirmation. The volume of the waste rock dump (F2) indicates that the adit was around 100' long, the distance required to undercut the pit. The mineralized vein proved worthless, and the project abandoned.

The excavation types and their distribution suggest that the prospectors were not experts but did have some knowledge. In support of the former assumption, the pits are haphazard and scattered. The prospectors expended great effort and time just to find a vein, let alone to track and sample it. In contrast, experienced prospectors were able to find and track veins with much less work, as is evident in some of the other complexes recorded for the Land Disposal. But the party discussed here was not completely green, knowing enough to strategically sample uncertain ground with crosscut trenches and pairs of pits.

The party may have included John T. Pursel, who staked and prospected the Iowa claim during the 1870s. The Iowa was immediately to the north, and Pursel had it surveyed for patent in 1882, installing a granite slab marking the southeast corner (F5). The surveyor then chiseled Cor. 2, 772 (mineral survey number) in the north face.

Prospect Complex Condition and Integrity

The complex is mixed in condition. All the excavations are well-defined and fairly intact. But erosion has washed in their rims and filled them with sediment 1' to 4' deep. Over time the forest has also deposited substantial duff. The portals of the two prospect adits completely collapsed and became linear subsidence zones. The dumps of the adits and larger pits are also becoming overgrown with saplings.

The site retains a few aspects of integrity. The numerous prospects and their waste piles in a deep forest setting convey feeling of the search for ore. But the site's design, in this case how the prospectors planned and implemented their search, is not abundantly clear because the

pits are haphazard, and a pattern difficult to perceive. The site never had structures or buildings, and materials and workmanship are thus irrelevant.

Prospect Complex Significance

The complex is significant as a contributing element of the landscape. The probes and their dumps add important small-scale detail, while the site is extensive and the largest excavations are visible enough to clearly convey a sense of intensive prospecting. The site's visual presence is localized, the thick forest concealing the site from remote overviews.

In its own right, the complex is recommended ineligible. Under Criteria A and B, association with important events, trends, and people is uncertain because archival research failed to find a site name or history. In terms of Criterion C, the site is not a good example of a prospect complex resource type. The pits are disorganized, scattered, and without clear pattern, reflecting the prospectors' haphazard sampling strategy. Further, complexes with these qualities are among Colorado's most common mining resources. The site will also not yield important information upon further study because buried deposits, complex feature systems, and artifacts are absent.

Prospect Complex Management Recommendations

The Land Disposal will adversely affect the complex. The resource is a contributing element of the landscape and lies on a BLM tract. Its transferal from federal domain to local government could pose a threat. Mitigation will be required.

The complex has some heritage tourism value as a landscape element. For this reason, its pits, trenches, and dumps should be avoided by land-use projects.

Linear Resource 5GL.2159.1 Troublesome Mine Road ***Project: Land Disposal***

Wagons delivered supplies to and hauled ore from the Troublesome Mine (5GL.398) via a road approaching from the east. The road is one of three legs, or segments, in a slightly larger network roughly T-shaped in aerial plan. The segments come together at a three-way intersection in an open, nearly flat meadow on Winnebago Hill's summit, 8,780' elevation. The main stem is a two-track (unrecorded) descending a short distance south and merging with a maintained county road. One branch (unrecorded) traverses east along the hill crest for 800' and disappears. The other branch, discussed here, extends 344' west-northwest to the mine. This segment alone was recorded because it was constructed specifically to service the mine, and it crosses a BLM land tract. The other two segments were graded to other, unknown destinations.

Troublesome Mine Road History

As a function of the Troublesome Mine, the road shares the same history as the mine. The road was probably graded to during the 1870s in support of initial development, and then saw

use during the mine's principal periods of operation. In particular, wagons provided service during the late 1890s and 1913-1917, and light trucks 1934-1938. Traffic was regular during the latter two time periods, when the mine was a good producer.

Troublesome Mine Road Description

The road begins at the T intersection on Winnebago Hill's summit, extends 344' to the mine, and forms a tight loop at the east base of its waste rock dump. Wagons traveled clockwise around the loop and pulled alongside an ore bin to receive payrock. The loop directed traffic back onto the road for an exit retracing the trip in. The road is best described in four segments.

Segment 1 extends 65' northwest from the intersection, through meadow and into a young aspen forest. The road is difficult to discern because of the vegetation, manifesting as a faint, impressed tread 7' wide. The segment ends where the road reaches the hill's abrupt north shoulder and then curves west-northwest.

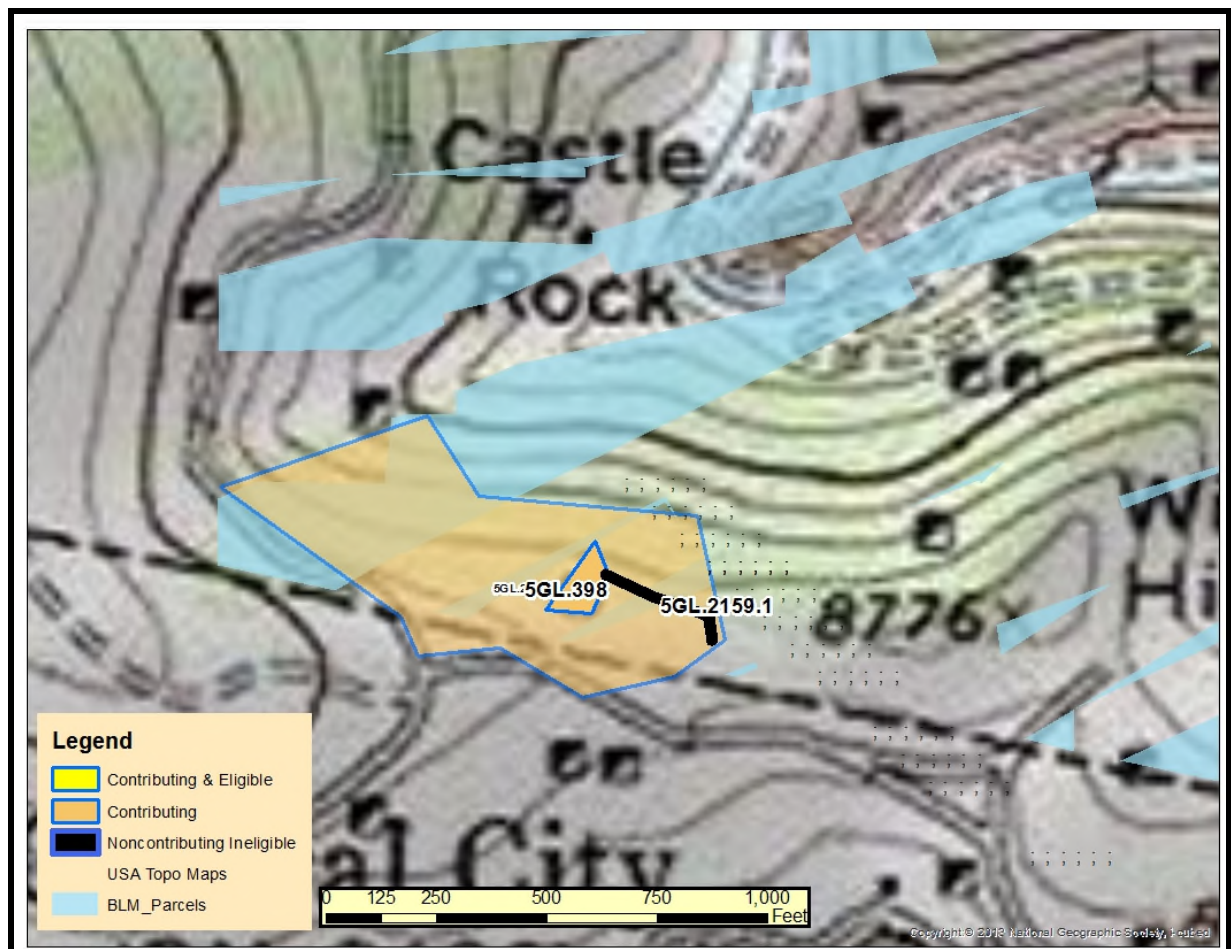


Figure 4.48: The enlarged topographic map illustrates the Troublesome Mine Road (5GL.2159.1), Troublesome Mine (5GL.398), and an encompassing but unrelated Central City Dump (5GL.2155).

Segment 2 is characterized by a cut-and-fill bed contouring along the hill's north shoulder directly toward the Troublesome Mine. During construction workers pried rocks from the ground and aligned them to retain the bed's fill-bank. The rocks are not continuous, and instead are grouped in disjointed segments. The bed is 8' and the tread 7' wide, and they extend 189' to the mine. The segment ends where the road splits for the loop.

Segment 3 ascends westerly 90' to the mine's surface plant area, while *Segment 4* continues 93' west-northwest to the ore bin. Wagons traveled up *Segment 3*, reached the mine's surface plant, turned sharply right, descended past the bin, and exited via *Segment 4*. Workers constructed the segments with the same cut-and-fill methods as above, arranging neat rock alignments to retain the bed, which is 8' wide. The tread is 7' wide. The segments are preserved but thickly overgrown with doghair fir saplings.

Troublesome Mine Road Interpretation

The Troublesome road is a typical mine access designed for wagon traffic. Wagons traveled to the mine via the road, veered onto an uphill branch, turned downhill to the bin, and left via an exit branch. The one-way loop, uphill to downhill, was intended to accommodate wagon and team, which was unable to simply back and turn around. The builders constructed the road for longevity, with a broad, flat tread and rocks retaining the fill-bank.

Troublesome Mine Road Condition and Integrity

The road is mixed in condition. The southeastern 200' are faint, poorly defined, and difficult to perceive because of thick overgrowth including lush grass and stands of aspen saplings. The northwestern 144', by contrast, are in good condition with a well-formed surface and preserved rock walls. That section is, however, choked with doghair fir forest, with much of the tread being unwalkable. Erosion has erased the short connector linking Segments 3 and 4, at the Troublesome dump's eastern base.

Integrity can be divided between the preserved and deteriorated sections. The southeastern 200' portion is too faint to clearly exhibit route, materials, workmanship, or feeling. However, the northwestern portion does, even though it is thickly overgrown. With all segments considered together, the loop at the mine is apparent, but the road's route southeast and its ties with the external system are not.

Troublesome Mine Road Significance

In terms of Section 106, the Land Disposal will have no effect on the Troublesome road. The resource does not contribute to the landscape, because it is both hidden by doghair forest and the topography of Winnebago Hill's north shoulder.

The road is also recommended ineligible because significance and integrity are insufficient. In terms of Criterion A, the road was built exclusively to serve the Troublesome Mine (5GL.398), a minor, unimportant gold producer officially ineligible itself. Under Criterion B, archival research found no link between important people and the mine or road. Regarding Criterion C, the resource is not a good example of the mine road resource type because the eastern half lacks sufficient integrity. The road is also unlikely to yield important information upon further study. The Troublesome road is connected to two other segments in what was a

separate system, but they end relatively near the site and will not support meaningful conclusions.

Troublesome Mine Road Management Recommendations

The Troublesome road warrants no further consideration. The road does not contribute to the landscape, is recommended ineligible, and has no tourism potential.

Linear Resource 5GL.2160 Project: Land Disposal

Robert Ingersoll Placer Ditch

The Robert Ingersoll Placer Mine was a hydraulic operation active during the 1930s. A mining outfit worked a pocket of gold-bearing surface gravel in the mouth of a minor, seasonal drainage descending Negro Hill at Chase Gulch's west end. The drainage descends down the hill's east flank and joins Quartz Creek adjacent to the Nelson Property, across from and west of Castle Rock. The gulch is steep upslope and flattens toward its Chase Gulch confluence.

Although the gravel pocket was limited in extent, the mining outfit worked it with hydraulic methods. Workers played jets of water from high-pressure hoses across the gravel, liquefying and washing it through gold-recovery sluices. Supplying the hoses and sluices with enough water required a delivery system, or infrastructure. The system included a supply ditch (5GL.2160) high on Negro Hill and a pipeline (5GL.2161) descending to the mine itself (5GL.2162). In a continuous east-southeast contour, the ditch began on the hill's east side, transitioned to Winnebago Hill's north shoulder, and ended in a low saddle. A flume carried ditchwater a short distance north to a collection intake at the pipeline's head. The pipeline descended to the mine in a steep, unbroken pitch, where distribution lines sent the water under pressure to points of use.

The ditch was recorded as a linear resource and is described below. The northwest head was around 8,790' elevation and the southeast end 8,760', with the section in between contouring along an extremely steep northeast-facing slope. Most of the area is overgrown with doghair fir forest.

Robert Ingersoll Placer Ditch History

Hydraulic mining was developed during the 1870s to process low-grade placer gravel in economies of scale. The practice was usually reserved for pockets and larger bench deposits stranded high on the sides of stream and river drainages. The general concept was simple. High-pressure water jets blasted and liquefied gravel and washed it into gold recovery sluices. Hydraulic workings took form as broad cuts and scars with precipitous cut-banks, sluice beds in recessed channels immediately below, and braided tailings deposits at an outwash point. Often, additional water flowed through the workings and continually swept loosened gravel into the sluices.

Although simple in overview, hydraulic mining had its complications. Professional engineering was necessary to allocate a sufficient water source, convey the water to the mine,

and pressurize it for jetting. Tight pipelines with a good fall-line created the pressure, and nozzles created the jet. The sluices had to be strategically located to capture the gravel even as the surrounding ground was being washed away.

The Robert Ingersoll was a basic version of a hydraulic mine, featuring the water infrastructure, small-scale workings, two sluices, a tailings dump, and an effluent retention dam. The infrastructure was limited to the supply ditch, pipeline, and water transfer structures.

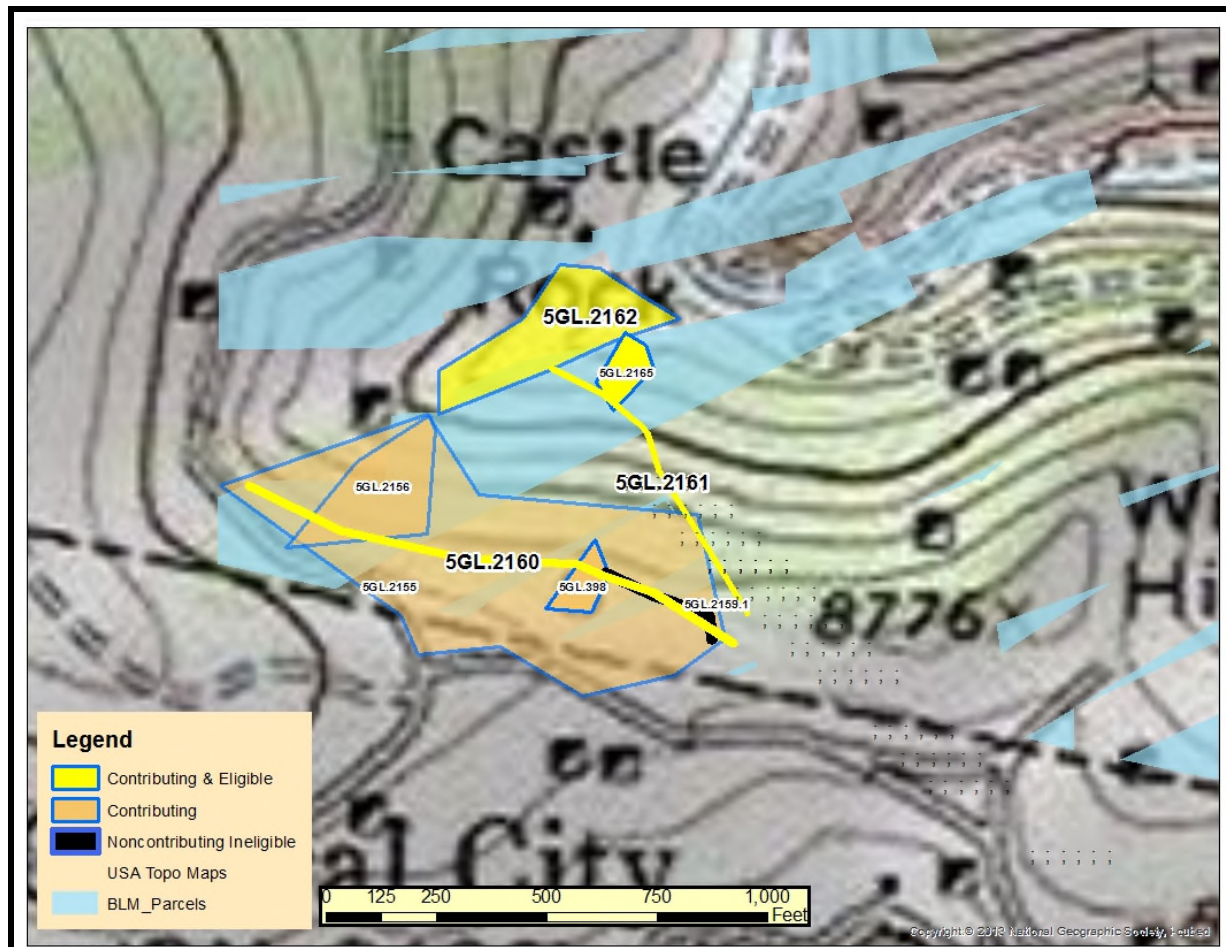


Figure 4.49: The enlarged topographic map emphasizes the Robert Ingersoll Placer Ditch (5GL.2160), Pipeline Bed (5GL.2161), and Placer Mine (5GL.2162). The ditch and pipeline cross several other sites also shown for context. 5GL.2156 = Prospect Complex; 5GL.398 = Troublesome Mine; 5GL.2159.1 = Troublesome Mine Road; 5GL.2155 = Central City Dump; 5GL.2165 = Prospect Complex.

Archival research found no information specific to the Robert Ingersoll. The name of the mine and its infrastructure is assumed here because the placer workings lie on the Robert Ingersoll claim. The claim's Mineral Survey Plat showed no placer workings, indicating that they were developed after 1881, when owners Fred Kruse, John B. Ballard, and Richard Mosley applied for a patent. At that time, Kruse and partners sank two 70' shafts, erected a shaft house over one, and built a residential house in the gulch where the placer mine was later developed.

The claim's namesake Robert G. Ingersoll was a famed orator, lawyer, and Populist who rose to prominence during the 1850s and died in Illinois in 1899.⁴²

Material evidence suggests that the placer mine was worked during the 1930s, a timeframe supported by Gilpin County's general mining history. The county had been suffering high unemployment and miniscule gold production following the mining industry's 1918 collapse, made worse by the Great Depression. President Franklin Delano Roosevelt increased gold's value in 1933 and again the next year, formalizing the new figure of \$35.00 per ounce with his Gold Reserve Act. The higher value combined with unemployment and lack of income-generating opportunities revived interest in the county's older placer deposits that had previously been abandoned as unprofitable. From 1934 through 1941, several large companies worked the North Fork of Clear Creek while smaller operations focused on tributaries such as Chase Gulch. The small outfits constituted a seasonal cottage industry of sorts, whose principal period was 1934 through 1938. By that time, they had exhausted the limited placer pockets, none of which received attention in the popular press.

Robert Ingersoll Placer Ditch Description

The ditch began at a water transfer structure on Negro Hill's east flank and contoured 1,184' southeasterly to an end point on Winnebago Hill's crest. The ditch passes through a prospect complex (5GL.2156) and the Troublesome Mine (5GL.398), naturally dividing it into five segments. Description follows the flow of water from northwest to southeast.

The water transfer structure was a frame box sided with planks, standing on a cut-and-fill platform 8'x30' in area retained by a well-made rock alignment. The structure received water from somewhere upslope and distributed it into the ditch described here, and possibly into an unimproved runnel descending directly northeast to the mine workings below. The structure and all its materials are gone, but a boulder intended to guy the structure remains at the platform's center. The boulder is 3'x3' in area and 2' high with a forged eye-bolt hammered into a drill-hole, the bolt serving as an anchor.

From the platform, *Segment 1* contours 180' southeast and reaches a prospect complex (5GL.2156). In the first 155', the ditch is nearly indistinct, but afterward, the ditch becomes a well-defined channel 2' wide and 1' deep with a jumble of overgrown boulders and cobbles along the downslope edge.

Segment 2 begins at the prospect complex, curves east-southeast, and contours 246' to another unrecorded prospect complex. The ditch takes form as a flattened bed 3' to 3 ½' wide with occasional cobble alignments retaining a fill-bank. After around 190', the ditch becomes well-formed, 2' to 2 ½' wide and 1' deep, with a cobble-ridden back-dirt berm 5' wide and 1' thick. Excavations in the prospect complex interrupt the ditch. A plank flume probably carried water through the complex.

Segment 3 begins on the unrecorded prospect complex's east side and extends 225' to the Troublesome Mine (5GL.398). The ditch reverts to a bench-like trail 3½' wide with eroded shoulder and sloped surface. At 165', the ditch becomes a well-defined channel through fractured bedrock. Workers heaved out boulders and cobbles and used them to line the downslope edge, shoveling back-dirt among the rocks where available. The ditch itself is 3' wide rim-to-rim, 1' wide along the floor, and 1' deep with rocky walls. The berm of rocks and back-

⁴² "Bob Ingersoll Passes Away" *Rocky Mountain News* 7/22/99 p1.

dirt is 4' wide and 1' to 2' high. Duff, junipers, and small trees now grow on both sides. Segment 3 ends at the Troublesome Mine's waste rock dump, which cascaded over the ditch and buried it.

Segment 4 passed through the Troublesome Mine's waste rock dump. When the mine operated during the 1930s, waste rock was dumped north of the shaft and over a plank culvert probably carrying water. The culvert completely collapsed and became buried by waste rock creep.

Segment 5 begins on the Troublesome dump's east edge and curves southeast 230' to the ditch's end. The ditch is again a flat bench 2½' wide at one time supporting a plank flume crossing over the Troublesome's access road (5GL.2159.1) and hugging its upslope side. Around 100' southeast of the mine, workers cut the ditch through a topographic bulge, creating a channel 30' long, 3' wide at top and 1' wide along the floor, with a berm of rocks and back-dirt along the edge. The ditch extends another 100' southeast onto the nearly flat, open crest of Winnebago Hill, a faint impression in meadow approximately 2' wide and 6" deep. At this point, the ditch simply ends.

The ditch has no associated artifacts or buried archaeological deposits. Food cans, bottle fragments, stove parts, and large canisters making up the Central City Dump (5GL.2155) are scattered along the ditch sides, with some items having rolled down onto the floor.

Robert Ingersoll Placer Ditch Interpretation

For interpretation, see the Robert Ingersoll Placer below.

Robert Ingersoll Placer Ditch Condition and Integrity

The ditch is fairly well preserved overall, although two sections are faint and difficult to trace. Most of the ditch manifests as either a well-formed trail-like bench or a linear channel incised into the ground, albeit overgrown with young fir and aspens. The northwestern 155' are heavily eroded and incomplete, being difficult to identify. Segment 4 through the Troublesome Mine's waste rock dump is no longer apparent, and the portion immediately east of the mine was disrupted by road improvement.

The ditch retains good integrity. Route design is clear, while the ditch itself conveys integrity of workmanship. With all wooden flume sections and water transfer structures gone, the resource has no integrity of materials. The setting is outstanding, and the ditch has feeling of water infrastructure.

Robert Ingersoll Placer Ditch Significance

The ditch is significant as a contributing element of the landscape and as an individually eligible resource. The ditch contributes to the landscape through its bold, excavated segments and length as a linear resource. Most of the ditch is apparent as it contours along Negro and Winnebago hills, adding detail of water infrastructure typical of placer mining to an otherwise hardrock mining landscape.

The ditch is recommended individually eligible under Criterion A for its connection to the Robert Ingersoll Placer (5GL.2162). The ditch was a component in a larger infrastructure providing the mine with water for hydraulic placer mining. Operated during the 1930s, the mine was important for its gold production and employment at a time when jobs, income, and

contributions to the county's economy were dearly needed. The mine was also important for its hydraulic engineering and capital investment, noteworthy in the county during the Great Depression.

The mine and its infrastructure are eligible as a whole under Criterion C. Together, the ditch (5GL.2160), connected pipeline bed (5GL.2161), and mine (5GL.2162) are a good example of a hydraulic placer mine and water delivery infrastructure. The ditch delivered water to the pipeline, which sent it down to the mine under pressure for use with nozzles. Workers then played water jets against gravel in the workings, liquefying it and washing it into a sluice that caught the gold. A settling pond and dam prevented effluent and sediment from fouling Quartz Creek, required by law by the 1930s. The infrastructure and mine convey the overall system, generalities of hydraulic mine design and engineering, and the fact that hydraulic mining continued during the 1930s, decades after popular history claims the practice was outlawed. The ditch clearly embodies its role in the operation.

The ditch and pipeline bed are also recommended eligible under NRHP Criterion D and SRHP Criterion E. Detailed study of the ditch, pipeline bed, and their interface, combined with in-depth archival research, may reveal important information about Great Depression era hydraulic mine engineering, design, and water infrastructure. One area of inquiry is the mine's source of water, which is presently unknown. The Robert Ingersoll Ditch received its water from another ditch or pipeline. This missing infrastructure link might be found through additional survey and traced to its origin for better understanding of the greater system. Research could provide additional information. Interface between the Robert Ingersoll Ditch and pipeline is another area of inquiry. An engineered structure transferred water into the ditch's northwestern head, and another structure from the southeastern end into the pipeline. Detailed examination when vegetation is thinnest and the ground most visible may reveal subtle archaeological features such as foundation impressions for a better understanding.

Robert Ingersoll Placer Ditch Management Recommendations

In terms of Section 106, the ditch is a contributing element of the landscape and is recommended individually eligible. The ditch also crosses three BLM land tracts. Disposal of the tracts from federal to local government ownership is an adverse effect, and mitigation may be required.

The ditch also has potential for heritage tourism as a component of the greater Robert Ingersoll Placer operation. The ditch should be interpreted with the rest of the complex.

Linear Resource 5GL.2161 Project: Land Disposal

Robert Ingersoll Placer Pipeline Bed

The pipeline bed, recorded as a linear resource, was the final leg in the Robert Ingersoll Placer Mine's water delivery system. A supply ditch (5GL.2160) high on Winnebago Hill's summit carried water to the pipeline (5GL.2161), which descended approximately 750' northwest to the mine itself (5GL.2162). The pipeline ended on the south edge of the mine's workings, where distribution lines sent water under pressure to points of use. A straight, lengthy

fall-line created the pressure, the route beginning at a low saddle 8,760' elevation and ending 150' lower, at 8,610' elevation. The pipeline itself was 2' to 3' in diameter and chalked in-place over a bed that was professionally designed and constructed. The bed was raised and retained by rock alignments to support the pipeline's great weight, while a depressed surface cradled the pipeline against shifting and buckling. The pipeline itself is long gone, but the bed is well-preserved. Surrounding slopes are very steep, northerly-facing, and overgrown with a dark third-growth lodgepole pine and fir forest. See Figure 4.49 for a map of the system and mine.

Robert Ingersoll Placer Pipeline Bed History

See the Robert Ingersoll Ditch history immediately above.

Robert Ingersoll Placer Pipeline Bed Description

The pipeline began near the ditch's end on Winnebago Hill's west crest. In its descent, the pipeline bed passes over a wagon road (unrecorded), through an unrecorded prospect complex, through a second complex (5GL.2165) and to the Robert Ingersoll Placer Mine (5GL.2162), naturally dividing it into five segments. Description follows the flow of water from southeast to northwest.



Figure 4.50: View south of Segment 4, 5GL.2161. The bed consists of sandy fill poured between two rock alignments, with a carefully depressed surface to cradle the pipeline. The left side was a gutter for storm runoff, drained through a stovepipe culvert visible at lower left.

Segment 1 extends 190' northwest to a wagon road (unrecorded), where the bed changes character and becomes *Segment 2*. The road contours east-west along the hill's shoulder. From its origin point, the bed crosses a low saddle between granite bedrock outcrops and then curves over the hill's north shoulder. The bed is barely improved, manifesting as a trough-like depression in sandy soil 3' wide and 6" deep with some rocks along the side. The rocks chalked the pipeline in place, preventing it from shifting or rolling. The trough is becoming overgrown and is difficult to perceive.

Segment 2 descends 190' from the wagon road to the south edge of an unrecorded prospect complex. The bed becomes a distinct structure designed and constructed specifically as a footing for a large-diameter pipe. Workers leveled a base approximately 5' wide with cut-and-fill methods and then used exhumed rocks for parallel alignments 2½' wide. They poured cobbles and coarse gravel in between for a slightly raised bed. The center is depressed approximately 6" to cradle the pipe and hold it in place.

Segment 3 begins with a change in both the bed's direction and character. The segment veers north-northwest, descends 100' through an unrecorded prospect complex, and becomes I on the south edge of a BLM land tract. The complex is unrecorded because it lies on a patented claim. An adit and a few prospect pits are on the bed's upslope west side, with a few more pits downslope and east. A wagon road approaches the adit also from the east.

The bed was built even better than *Segment 2* above and adapted to the prospect complex's irregular terrain. The bed enters the complex, descends 25', and encounters the adit's wagon road (unrecorded). The road dates to the 1870s and was cut from the mountainside, creating a 10' gap that the pipeline had to span. Rather than support the pipe with a trestle, workers built the bed up over the crossing by pouring fill in between dry-laid rock walls 2' to 3' high and 10' long. To prevent water from damming behind the elevated section, workers also purposefully arranged gap between rocks as a culvert. Approximately 33' below the crossing, the bed curves around the base of the adit's waste rock dump and then reaches the BLM tract, marked by a recent survey monument.

In *Segment 3*, the bed becomes expertly designed and constructed. Workers graded a base 6' wide with cut-and-fill methods, and as before, aligned two rows of exhumed rocks for the bed itself, 3' wide. They purposefully chose rocks fairly uniform in size, stacked them in two courses, and filled the space between with sand and fine gravel. The upslope side had a gutter for drainage, the center was slightly depressed, and the retaining rocks tilted slightly inward to help cradle the pipeline.

Segment 4 curves northwest and descends 134' through the BLM tract to a second prospect complex (5GL.2165). The segment emerges from the complex and curves further west-northwest, the exit and curve marking the segment's end. The bed is a continuation in dimensions, design, materials, and workmanship from above. Approximately 110' from the BLM entry, workers integrated another culvert to divert gutter runoff. The culvert is a hot-dipped stovepipe crossing diagonally underneath the bed.

Segment 5 descends steeply west-northwest 130' from the prospect complex (5GL.2165) to the placer mine's south edge. The basement is only 3' wide, a single rock alignment retaining the actual bed's downslope edge. The surface is slightly depressed like the preceding segments. The bed ends abruptly on the placer mine's south edge, coincident with the BLM tract's north edge. Two second-growth lodgepole pines are gateposts of sorts for the bed. At one time, the pipeline was fitted with valves and distribution lines extending to nozzles east and west in the workings. No evidence of the necessary support structure remains.

Robert Ingersoll Placer Pipeline Bed Interpretation

For interpretation, see the Robert Ingersoll Placer below.

Robert Ingersoll Placer Pipeline Bed Condition and Integrity

The pipeline bed is well preserved overall, although *Segment 1* is faint and difficult to trace. The other four segments manifest as a bold, well-formed bed retained by rock alignments, elevated on a cut-and-fill basement surface. The descent is unbroken and the bed complete from end-to-end.

The bed retains good integrity. Design of the overall route and the bed itself are clear, while the rock walls and sandy surface reflect materials and workmanship. Connections with the supply ditch and placer mine provide integrity of association, while the bed's intact condition and a good setting create feeling of water engineering for placer mining.

Robert Ingersoll Placer Pipeline Bed Significance

The pipeline bed is significant as a contributing element of the landscape and as an individually eligible resource. The bed contributes to the landscape through its structural elements, unobstructed route in forest, and length as a linear resource. The lower four segments are apparent as the bed and its rock alignments ascend through forest on Winnebago Hill's north flank, adding detail of water infrastructure typical of placer mining to an otherwise hardrock mining landscape.

The bed is recommended individually eligible under Criterion A for its connection to the Robert Ingersoll Placer (5GL.2162). The bed was a component in a larger infrastructure providing the Robert Ingersoll with water for hydraulic placer mining. Operated during the 1930s, the mine was important for its gold production and employment at a time when jobs, income, and contributions to the county's economy were dearly needed. The mine was also important for its hydraulic engineering and capital investment, noteworthy in the county during the Great Depression.

The mine and its infrastructure are eligible as a whole under Criterion C. Together, the ditch (5GL.2160), connected pipeline bed (5GL.2161), and mine (5GL.2162) are a good example of a hydraulic placer mine and water delivery infrastructure. The ditch delivered water to the pipeline, which sent it down to the mine under pressure for use with nozzles. Workers then played water jets against gravel in the workings, liquefying it and washing it into a sluice that caught the gold. A settling pond and dam prevented effluent and sediment from fouling Quartz Creek, required by law by the 1930s. The infrastructure and mine convey the overall system, generalities of hydraulic mine design and engineering, and the fact that hydraulic mining continued during the 1930s, decades after popular history claims the practice was outlawed. The pipeline bed clearly embodies its role in the operation.

The bed is also an excellent example of its resource type, a hydraulic placer mine pipeline bed. The linear structure was professionally designed and constructed, and exhibits important attributes specific to function. In particular, the bed is elevated, features drainage culverts, and has a depressed surface to hold the pipeline in place. In general, intact placer mine infrastructure is rare, and complete pipeline beds are even more so.

The ditch and pipeline bed are also recommended eligible under NRHP Criterion D and SRHP Criterion E. Detailed study of the ditch, pipeline bed, and their interface, combined with in-depth archival research, may reveal important information about Great Depression era hydraulic mine engineering, design, and water infrastructure. One area of inquiry is the mine's source of water, which is presently unknown. The Robert Ingersoll Ditch received its water from another ditch or pipeline. This missing infrastructure link might be found through additional survey and traced to its origin for greater understanding of the greater system. Research could provide additional information. Interface between the Robert Ingersoll Ditch and pipeline is another area of inquiry. An engineered structure transferred water into the ditch's northwestern head, and another structure from the southeastern end into the pipeline. Detailed examination when vegetation is thinnest and the ground most visible may reveal subtle archaeological features such as foundation impressions for a better understanding.

Robert Ingersoll Placer Pipeline Bed Management Recommendations

In terms of Section 106, the pipeline bed is a contributing element of the landscape and is recommended individually eligible. The bed's northern 260' cross a BLM land tract. Disposal of the tract from federal to local government ownership is an adverse effect, and mitigation may be required.

The pipeline bed also has high heritage tourism potential. The bed is an important component of the greater Robert Ingersoll Placer operation, which should be interpreted. The bed is also a ready-made link in the proposed Oro Mine loop trail. A few improvements are suggested:

- The bed should be preserved in its own right because of its importance. Maintaining the bed's historic character is thus necessary.
- If the bed is used as a recreational trail, impacts must be considered. Mountain bike traffic should be a one-way ascent. Descending traffic will skid, gouge the bed's surface, promote erosion, and lead to the bed's disintegration. Foot traffic can be two-directional.
- Remove saplings from the bed's surface, with stumps to grade.
- Interpret with signage at the top and bottom.

Robert Ingersoll Placer Pipeline Bed Heritage Tourism Potential: High

Interpretive Signage. The resource has high interpretive and education potential. In combination, the supply ditch, pipeline bed, and mine site are an outstanding archaeological example of a hydraulic placer mine. Intact hydraulic mines are rare, and ones with infrastructure are rarer yet. The entire operation and its remnants should be interpreted.

Interpretive Loop Trail. The pipeline bed is a link in a proposed interpretive loop trail. The route begins at the Robert Ingersoll Placer (5GL.2162), south of Nelson Property. The placer mine is an interpretive stop. The trail continues west up Oro Mine Road (5GL.2151) to the Oro Mine (5GL.2150). The trail then follows Oro Mine Pack Trail (5GL.2152) to Winnebago Hill summit, turns east (left) along a wagon road, and then descends north along the Robert Ingersoll Pipeline Bed (5GL.2161) back to the placer mine.

Site 5GL.2162 Robert Ingersoll Placer
Project: Land Disposal

The Robert Ingersoll Placer was a hydraulic operation at the mouth of a minor drainage at Chase Gulch's west end. The drainage steeply descends Negro Hill's east flank, flattens where the mine is, and joins Quartz Creek. Castle Rock is east and elevation is 8,600'. Other resources surround the site. The Nelson Property (5GL.2153) is adjacent and north, and the Robert Ingersoll Pipeline Bed (5GL.2161) ascends Winnebago Hill to the south. Original Chase Gulch Road (5GL.2126.2) skirts the placer mine's east side. Winnebago Hill is overgrown with a deep third-growth lodgepole pine and fir forest, while Negro Hill features a mix of open meadow, stands of aspens, and patches of ponderosa pine forest. Thick vegetation interfered with quality photography. See Figure 4.49 above for relationship to the ditch and pipeline.

The placer mine is an important resource because it is a well-preserved, archaeological example of a hydraulic operation. Preserved placer mines are very rare and good examples few because most are found in environments prone to flooding and erosion.

Robert Ingersoll Placer History

See the Robert Ingersoll Ditch history above.

Robert Ingersoll Placer Description

In overview, the Robert Ingersoll was a fairly small but typical hydraulic placer in most regards, featuring special adaptations for compliance with environmental regulations in force during the 1930s. The mine had its own infrastructure within the workings, in addition to the water delivery system discussed above. The workings centered on a gold-bearing gravel layer in the lower end of a seasonal drainage descending northeast down Negro Hill, on Chase Gulch's west side. The layer was thickest over the drainage floor and thinned with distance up the north and south sides. Miners used nozzles to blast the gravel loose and wash it into sluices that caught the gold. The nozzles drew water under pressure from plumbing extending east and west from the pipeline's end. The plumbing required no lasting structures because it was impermanent and light in duty. The exact type of nozzles is uncertain, although in context of the Great Depression, they could have been simply fire-hoses.

The mine had two sluices descending at a gentle angle to prevent a faster water current from flushing the gold out altogether. The sluices were wooden flumes 2' to 3' wide nailed to cross-members, in turn supported by rock alignments and wooden pilings. The sides were 1' to 2' high and flush against the ground so sediment could be hosed directly in. The main sluice descended the length of the workings in stairstep flights, some having been countersunk into the drainage floor so liquefied gravel could be directly washed in over the rim. The second sluice extended northeast along Negro Hill's base to capture soil mobilized by both nozzles and miners with shovels. Liquefied gravel flowed over the top of a low concrete wall and into the second sluice, descending alongside. Both sluices ended at a retention dam blocking the gulch mouth.

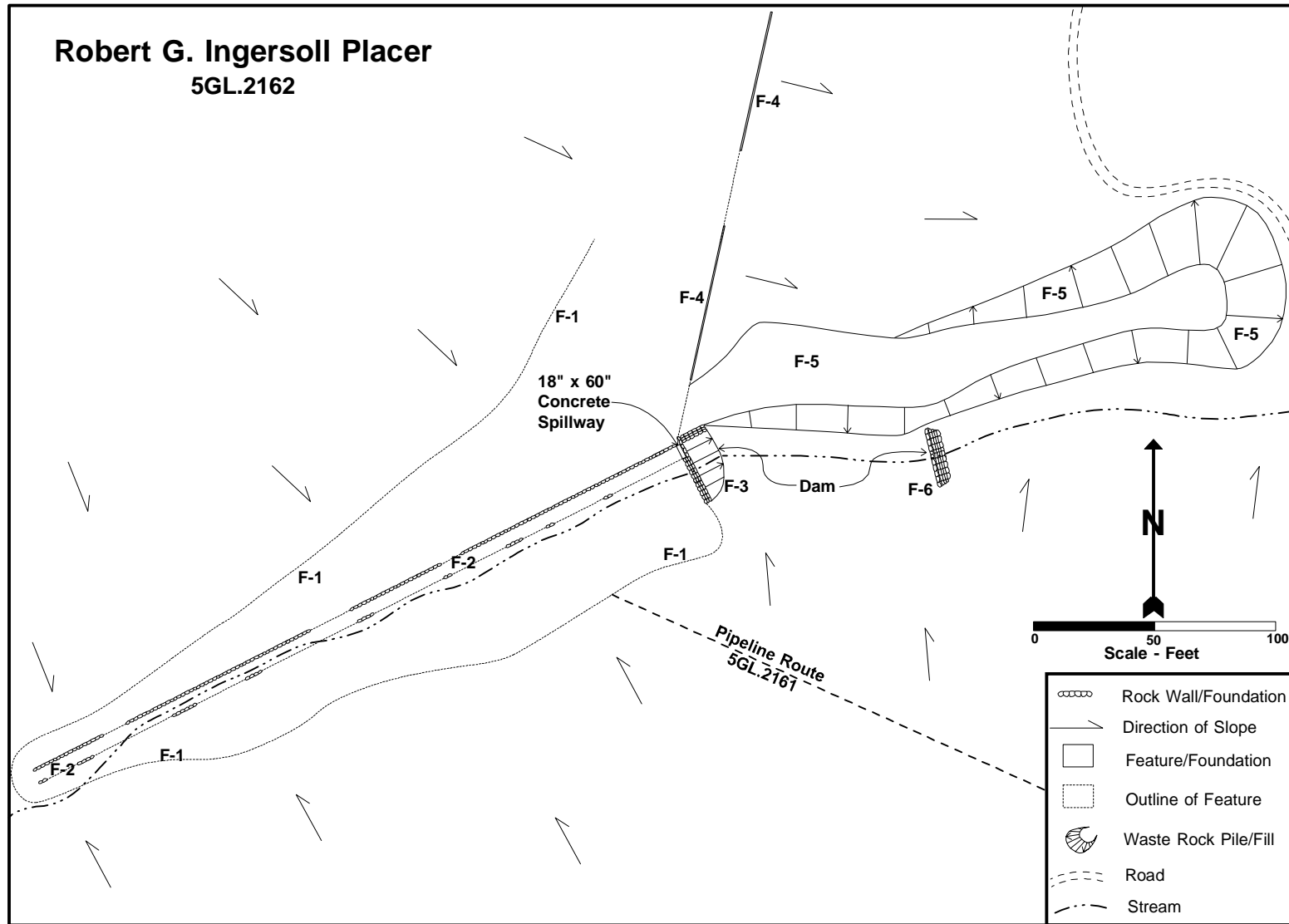


Figure 4.51: Plan view of Robert Ingersoll Placer, 5GL.2162.

The dam was built to comply with water-quality laws during the 1930s, however lax they might be, and was part of the mine's overall infrastructure. The dam's purpose was to capture uncontrolled runoff from the placer workings before reaching and fouling Quartz Creek. As muddy effluent collected behind the dam, gravity naturally separated heavy sediment from cleaner water, and when the level was high enough, a special drain port in the dam's rim decanted the water into a spillway.

The sluice emptied its tailings into a pipeline extending northeast from the dam. Tailings and water flowed together out to a large dump at the workings' mouth, where they solidified and took form as a massive lobe of sediment. The mining outfit hoped that percolation through the mound sufficiently filtered the effluent prior to entry into Quartz Creek.

The workings (F1) are characteristic of small-scale hydraulic operations. The mining outfit started at the drainage mouth and worked its way up the floor and outward along both sides, ceasing where the drainage constricts to a narrow and steep channel. The workings became 325' long, 130' wide at the mouth, and 10' at the upstream constriction. Today, the workings are outlined by a low cut-bank 2' to 3' high and an abrupt change in slope pitch, texture, and soil type. Above the workings, slopes are very steep with silty loam soil, numerous cobbles, and small boulders. At the boundary, the slope angle relaxes, cobbles and boulders disappear, and soil becomes sandy with much gravel and little organic material. Hydraulic mining stripped away the historic soil, while workers screened out the cobbles to prevent them from clogging the sluices.

Both mining and seasonal runoff drainage created a water channel through the workings and down the drainage floor. The channel meanders and is 10' to 25' wide with a braided floor and tailings piles typical of hydraulic placering. Miners inadvertently started the channel by shoveling gravel into the mine's sluice system, while later runoff made its course permanent.

The workings are presently well-preserved but are being overtaken by aspen and pine saplings. Abrupt cut-banks outline the footprint, the floor is still very sandy with little topsoil, and the drainage channel has not been heavily altered by storm runoff.

The two sluices are gone, but much of their foundations are preserved and interpretable. The main sluice's foundation (F2) manifests as dry-laid rock wall segments and alignments descending 297' along the drainage channel's north floor, to a dam (F3). The foundation's highest, southwestern segment is a nearly unbroken wall 137' long and 1' to 2' high embedded against the channel side. It both supported the sluice and forced liquefied gravel over the rim and down in. A rock alignment parallels the wall's southeast side, 5' away, and it supported the sluice's footers. At the segment's end, the sluice passed through a low topographic rise on its route to the dam. Miners dug a trench approximately 33' long and several feet deep for the sluice, which was essentially countersunk into the ground. The walls later slumped and became a linear depression 3' wide and 1' deep overgrown with junipers. Beyond the trench, the sluice continued northeast above-ground, represented by a second foundation segment. The foundation manifests as a rough and eroded rock wall approximately 42' long, with disjointed alignments downslope which at one time supported the sluice footers. Placer runoff eroded a gap in the rocks, and the foundation's third segment became a disjointed wall approximately 65' long. Individual boulders carried the sluice the remaining 30' to the dam.

The second sluice extended northeast from the dam to collect gravel washed from the base of Negro Hill. The sluice was supported by and rested against a wall (F4) of concrete and mortared rocks. The sluice rim was flush with the wall's top so gravel could be hosed directly in. The wall is 180' long, 1' high, 6" thick, and cracked though mostly intact.

The dam (F3) was a dry-laid rock wall 3' thick, 8' high, and 30' long spanning the drainage mouth. Originally, the brow was finished with concrete but this has been washed away by storm runoff. Successful in its function, the dam backed up a pond of sediment 6' deep. The dam's north end featured the decanting drain and spillway. The intake is a rectangular opening 1½'x4½' in plan with a concrete lip allowing water to pour in when the pond level was high enough. The water dropped into a concrete box culvert 4½' wide, 2½' high, and 4' long passing through the dam. The water emptied onto a dry-laid rock spillway 12' long and turned into the drainage channel. Presently, the dam is mostly intact, storm runoff washing out a V-shaped section 3' deep and 8' across.

A flume or a pipeline carried tailings from the sluice end, at the dam, to a repository northeast of the workings. Over time, the mining outfit built up a lobe of material (F5) approximately 50' wide, 246' long, and 10' thick. As the dump gradually grew eastward, it buried original Chase Gulch Road (5GL.2126.2), which had to be rerouted around the end. The dump's surface slopes gently east and features several salvaged mine rail anchors for the pipeline.

During the early 1860s, the operators of a nearby stamp mill (5GL.2167) constructed a dam in the drainage to impound and divert water into a flume for water-power. During the 1930s, the placer outfit adapted the dam as a secondary catchment for more sediment. Well-made with dry-laid construction, workers used rocks and boulders of various sizes for a wall 3' thick, 7' high and 25' across. The center had a spillway 5' wide and 2' lower than the dam's brow, the gap originally gated with a plank bulkhead. The dam is well-preserved with 7' of sediment behind. During the 1970s, the Nelsons, living at the nearby Nelson Property (5GL. 2153), dumped refuse into the drainage at the dam's toe.

The site lacks buried archaeological deposits because activity was limited to placer mining, which tended not to generate materials in volume. Placer mines also were generally poor deposition environments.

As is typical of placer mines, the artifact assemblage is impoverished. A few pieces of structural debris such as wire nails, lumber fragments, and sheet iron are scattered in the workings and on the tailings dump. Concrete is incorporated into the dam and second sluice wall, and salvaged mine rail stubs were hammered into the dump to support an effluent pipeline, now gone. A few bottle fragments are on the dump, as well.

Robert Ingersoll Placer Interpretation

In design and feature type, the Robert Ingersoll follows a pattern characteristic of small hydraulic placer mines. A professionally engineered system involving a supply ditch, pipeline, transfer structures, and distribution plumbing provided the mine with water under pressure for nozzles. The pipeline was accurately surveyed from ditch end to the mine, and its bed was expertly constructed with thoughtful details such as the depressed surface to cradle the pipe against rolling, shifting, and buckling.

The two sluices were well-positioned to receive gravel liquefied in the drainage, and northeast along Negro Hill's base. In many hydraulic mines, gravel was hosed into the sluice head, with water carrying it through the sluice's trunk. At the Robert Ingersoll, the sluices were arranged to receive gravel along their entire lengths instead of one end, which was more efficient. The sluices were also supported by lasting rock foundations instead of impermanent wood pilings prone to collapse.

The sediment ponds and dams are an unusual feature absent from most other placer mines. Between 1900 and 1915, farmers and municipalities in the Denver area successfully passed legislation requiring placer companies to keep effluent out of streams. The high costs of impoundment and lack of space to do so forced small operations to close. The Robert Ingersoll outfit, however, devised a successful system of catchment, decanting, and filtering through the tailings dump.

The types of nozzles used to liquefy gravel remain speculative. Large-scale operations used proper hydraulic monitors similar to water cannons, anchored to timber foundations to resist great force of the jets. The foundations were buried in circular platforms allowing miners to swivel the monitors and blast throughout the workings. The Robert Ingersoll lacks evidence of proper monitors, which may have been out of proportion with the operation's small scale. Instead, the mining outfit probably provided hand-held fire hoses, which were inexpensive.

A number of factors strongly suggest that the site dates to the 1930s. First, the sediment impounding system places the timeframe after around 1900, and few if any small-scale placer mines operated between then and the Great Depression. Further, Gilpin County enjoyed a wave of small-scale mining during the decade. Second, the mining outfit used salvaged materials in its structures, a common Depression-era practice. Included are the mine rails for the tailings pipeline. In rerouting Chase Gulch Road around the tailings dump, the outfit also used salvaged boiler smokestack as a culvert (discussed above with the road). By the 1930s, cast-off mining junk was readily available. Last, the use of Portland concrete was rare for earlier mines.

Robert Ingersoll Placer Condition and Integrity

The site is in fair condition for a placer mine. The cut-bank outline of the workings and the abrupt soil change on the hillsides above are clearly perceptible. The drainage floor features braided runnels and sandy deposits typical of hydraulic placers. The sluice foundations are readily traceable, the tailings dump is obvious, and the dams are intact. Erosion washed away the dams' brows and deepened the seasonal stream channel meandering through the workings. The channel appears more natural than manmade. Thick stands of aspen and fir saplings are the site's principal deficiency, growing throughout the workings. The saplings reduce visibility of some features and are blanketing the sandy floor with humus.

The site has good integrity. The sluice foundations, dams, and decanting drain convey design of the infrastructure, and how the mine operated. The dams and second sluice wall also have integrity of materials and workmanship. The site also has association and feeling of placer mining during the Great Depression, and lies in a preserved setting.

Robert Ingersoll Placer Significance

The Robert Ingersoll Placer is significant as a contributing element of the landscape and an individually eligible resource. The site contributes to the landscape through its massive tailings dump and sandy workings, while the dams and sluice foundations provide small-scale detail characteristic of placer mining.

The site is recommended individually eligible under Criterion A for its participation in Gilpin County's Depression-era placer revival. The Robert Ingersoll and other small-scale mines were important for their gold production and employment at a time when jobs, income, and

contributions to the county's economy were dearly needed. The mine was also important for its hydraulic engineering and capital investment, noteworthy in the county during the Depression.

The mine and infrastructure are eligible as a whole under Criterion C. Together, the supply ditch (5GL.2160), pipeline bed (5GL.2161), and mine (5GL.2162) are a good example of a hydraulic placer mine and its water delivery infrastructure. The ditch delivered water to the pipeline, which sent it down to the mine under pressure for use with nozzles. Workers then played water jets against gravel in the workings, liquefying it and washing it into a sluice that caught the gold. A settling pond and dam prevented effluent and sediment from fouling Quartz Creek, required by law by the 1930s. The infrastructure and mine convey the overall system, generalities of hydraulic mine design and engineering, and the fact that hydraulic mining continued during the 1930s, decades after popular history claims the practice was outlawed.

The site alone is a good example of its resource type, a hydraulic placer mine. The site's archaeological features clearly convey the workings, the sluice system, tailings disposal, sediment capture, and effluent decanting. Further, the infrastructure reflects professional design and construction. In general, intact placer mines are rare because they usually lie in environments favorable to flooding and erosion.

The placer mine is also recommended eligible under NRHP Criterion D and SRHP Criterion E. Detailed documentation and study of the workings and infrastructure, combined with in-depth archival research, will reveal more information about the Robert Ingersoll. Additional mapping can enhance the current understanding of the sluice and decanting systems, and possibly identify nozzle stations. The findings can be extrapolated to small-scale hydraulic mining in general.

Robert Ingersoll Placer Management Recommendations

In terms of Section 106, the Robert Ingersoll Placer is individually eligible and a contributing element of the landscape. The site's northern tip and southeastern edge are superimposed over BLM land proposed for disposal. Conveyance of the land from federal to local government presents an adverse effect. Mitigation may be required.

Among the more important resources around Black Hawk, the site also has excellent heritage tourism potential. Easily accessed from Chase Gulch Road, the site is a good candidate for interpretation. The following actions are recommended for improvement:

- Record the site in greater detail and conduct additional archival research. A better site map and history are important for interpretation.
- Remove saplings from placer workings, and thin surrounding forest. Thinning is necessary for site presentation and preservation. Use caution around sluice foundations. Supervision is advised.
- Interpret site with signage or other media.
- Grade interpretive trail through site.

Robert Ingersoll Placer Heritage Tourism Potential: High

Interpret Site. The resource has high interpretive and education potential. In combination, the supply ditch, pipeline bed, and mine site are an outstanding archaeological example of a hydraulic placer mine. Intact hydraulic mines are rare, and ones with infrastructure are rarer yet.

The entire operation and its remnants should be interpreted.

Interpretive Loop Trail. This site would be a key point of interest in the proposed Oro Mine interpretive loop trail discussed above.

Site 5GL.2165 Prospect Complex
Project: Land Disposal

During the 1860s or 1870s, a prospecting party conducted an organized search for a gold vein on Winnebago Hill's far northwestern flank. They dug a linear assemblage of pits and trenches but realized little if any success. The prospect complex, the resource type, is at 8,560' elevation on a very steep northeast-facing slope blanketed with a dark second-growth fir forest. The Robert Ingersoll Pipeline bed (5GL.2161) passes the site's southwestern head.

Prospect Complex History

The site's name could not be determined, and a name is necessary for a history. Prospectors probably created the complex during the exploration peak of the 1860s or early 1870s.

Prospect Complex Description

The prospecting party initially determined that a vein trended northeast through the hillside by encountering samples of float, or weathered mineral specimens, scattered on the hillside. Aware that the float originated from a vein and emerged to the surface through soil, they implemented strategic sampling plan to find the vein. The prospectors likely began by digging a pit (F4) 3' in diameter to expose bedrock, and when their sampling point proved barren, expanded the search northwest and southwest. To the northwest, they incised a trench (F6) and substantial pit (F7) into bedrock. The trench is 6' wide, 20' deep, and 6' deep, while the pit is 8'x12' in area and 7' deep. To the southwest, they blasted another pit and trench (F1, F2) similar in size. The pit apparently revealed the sought-after vein.

Accurately projecting its northeast strike, the party tracked it with a 100'-long series of probes. In particular, they blasted two trenches and a deep pit (F3, F5, and F8), exposing a promising lead. Digging deeper, the prospectors enlarged the pit to 15'x15' in area and 9' deep. All the pits and trenches are presently distinct, well-preserved, and obvious.

Convinced that the vein offered gold ore along its length, the prospectors undercut the vein with a small adit. Starting in the lower trench (F8), they drove the adit horizontally approximately 90' southwest, passing below the series of surface probes. They also used wheelbarrows to dump waste rock downslope and northeast, depositing a low tongue 18'x27' in area and 4' thick. The adit has since collapsed and is a linear subsidence 5' wide, 22' long, and 3' deep presently filled with soil and duff, while the waste rock pad is blanketed with more duff and partially overgrown with fir saplings.

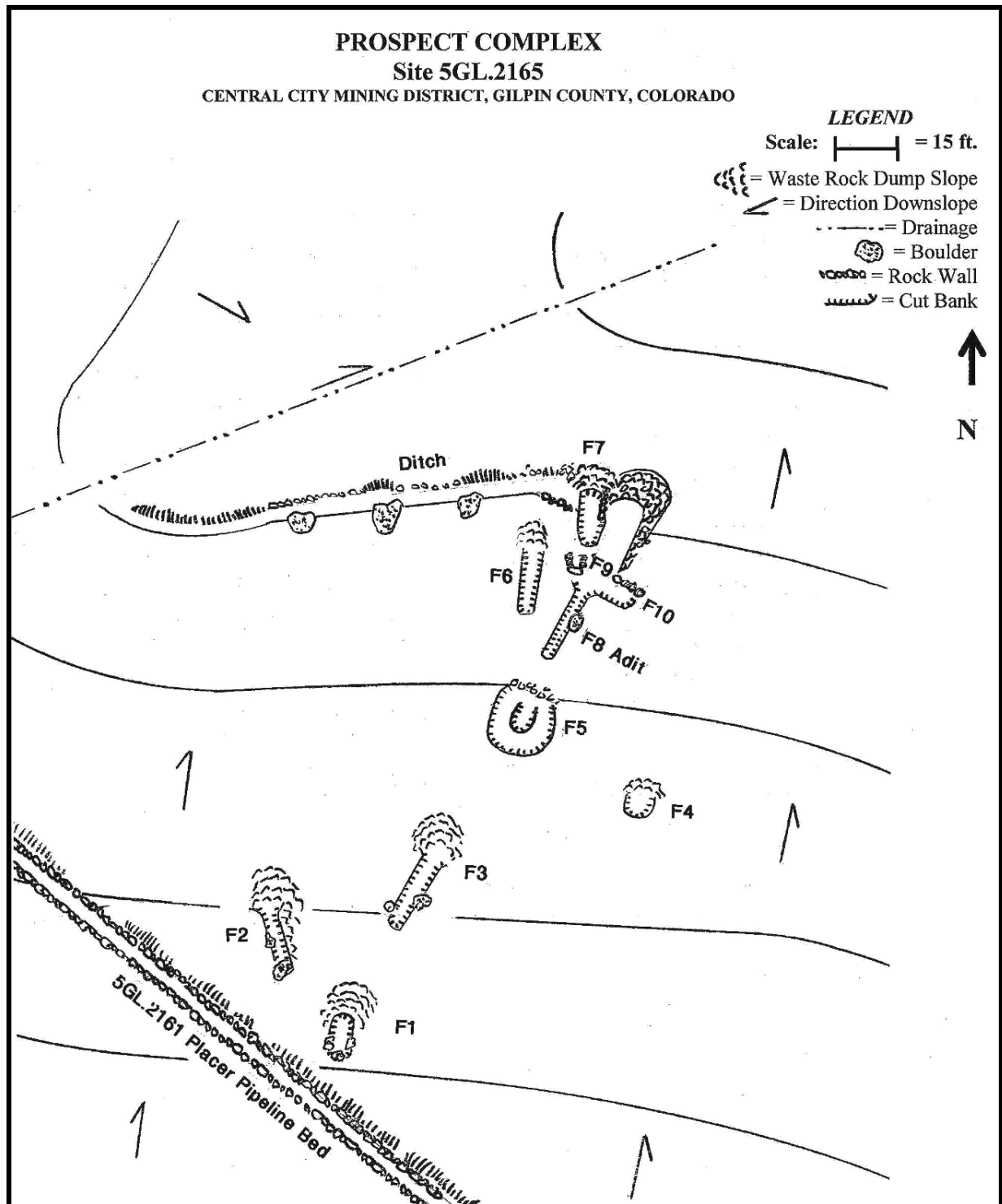


Figure 4.52: Plan view of Prospect Complex, 5GL.2165.

The prospectors also erected a simple wall tent on a cut-and-fill platform (F10) 9'x10' in area retained by a rock alignment. The tent either sheltered a relocated shop or a temporary residence. The platform is preserved but is subtle because the cut-bank is faint and duff blankets the surrounding ground. The duff and soil conceal artifacts except for several cut nails.

The cut nails are the site's only surface artifacts. Duff and sediment might conceal a few other small items scattered around the open-air field forge and tent platform as noted above, and these might qualify as meaningful buried deposits. Although artifact density and variety can be expected to be low, the buried assemblage may offer dateable materials that could clarify the site's timeframe.

Prospect Complex Interpretation

Material evidence indicates that the prospectors were experienced and implemented a strategic sampling plan based on knowledge of the local geology. They began with a randomly located pit (F4) to expose bedrock for initial sampling. When the sample proved negative, the prospectors moved approximately 80' northwest and southwest and blasted out two pairs of probes. The triangular arrangement bracketed the most likely location and revealed the vein. Already aware that the region's veins trended northeast, the prospectors were able to efficiently track their discovery with accurately placed trenches and pits, regularly spaced approximately 25' apart. Combined, the triangulation and tidy, linear series was an effective strategy resulting in minimal work with maximum sampling results. The vein proved barren of ore despite this effort, and the prospectors abandoned further work.

Prospect Complex Condition and Integrity

As an archaeological resource, the prospect complex is in good condition. All the excavations are well-defined and minimally filled with slumped soil and duff. The adit portal completely collapsed and became a linear subsidence zone, but it is distinct as an adit because the associated waste rock dump is preserved. The open-air field forge is identifiable despite crumbling of its upper course of rocks and accumulation of soil and duff around the base. The tent platform retains its original surface, fill-bank, and rock alignment, although becoming overgrown with saplings.

The site retains a few aspects of integrity. The prospect pits, trenches, and adit reflect an organized and planned strategy, which qualifies as a sampling design. The deep forest setting combined with several neighboring prospect complexes conveys feeling of the search for ore. The site lacks integrity of materials and workmanship because equipment and buildings are gone.

Prospect Complex Significance

The complex is significant as an individually eligible resource and a contributing element of the landscape. The field forge, the probes, and their dumps add important small-scale detail, while the site itself is extensive and visible enough to clearly convey a sense of intensive prospecting. The site's visual presence is localized; the thick forest conceals the site from remote overviews.

The complex is recommended individually eligible under Criterion C because the site is a good archaeological example of its resource type: a prospect complex. Overall, the site conveys

the search for a mineralized vein, its discovery and deeper probing through an adit, and activities related to maintaining equipment for work in hard rock. The pits and adit conform to patterns clearly reflecting an organized, planned sampling strategy implemented by experienced prospectors. Digging the pits and driving the adit dulled picks and drill-steels, which had to be sharpened by a blacksmith. The site's open-air field forge was the facility used to maintain the tools, where open-air forges are characteristic of short-lived prospects.

The site is recommended eligible under NRHP Criterion D and SRHP Criterion E for buried archaeological deposits likely around the field forge and tent platform. The site's timeframe is presently unknown because archival research failed to find information, leaving buried artifacts as the only means for determining a date. If material evidence proves that the complex was developed during the 1860s or early 1870s, then the complex becomes eligible under Criterion A as an example of a prospect complex from Colorado's first years of mining and associated settlement. In general, resources dating to the 1860s are very rare.

Prospect Complex Management Recommendations

The Land Disposal will adversely affect the complex. The resource is a contributing element of the landscape, recommended individually eligible, and lies on a BLM tract. The tract's transferal from federal domain to local government could pose a threat to the resource. Mitigation will be required.

The complex has high value for heritage tourism as a good, interpretable example of an early prospect complex. To this end, the following actions are recommended:

- In-depth archival research. Further research may reveal the site's name and history.
- Test buried archaeological deposits. Testing may provide important information defining the site as even more significant, and for a full interpretive story.
- Interpret with signage.
- Remove saplings around the adit, dump, forge, and tent platform. Supervision is required.
- Reconstruct field forge.

Prospect Complex Heritage Tourism Potential: High

Interpret Site: The site has high potential for interpretation because it is readily accessible and a good example of a hardrock prospect complex. The site strongly conveys a sense of feeling and the methods used to find the area's gold veins. In general, prospecting was the first step in discovery and development of all Black Hawk's mines.

Site 5GL.2166 Prospect Complex ***Project: Land Disposal***

The site, a prospect complex, encompasses a cluster of four pits and three trenches dug in search of a mineralized vein. Residential features and support facilities such as a blacksmith forge are absent, the prospectors living and maintaining their tools somewhere off-site. The

complex is on Chase Gulch's west floor, 8,560' elevation, and south of Castle Rock. Slopes are extremely steep, northeast-facing, and crowded by doghair fir forest. The site is on a BLM tract.

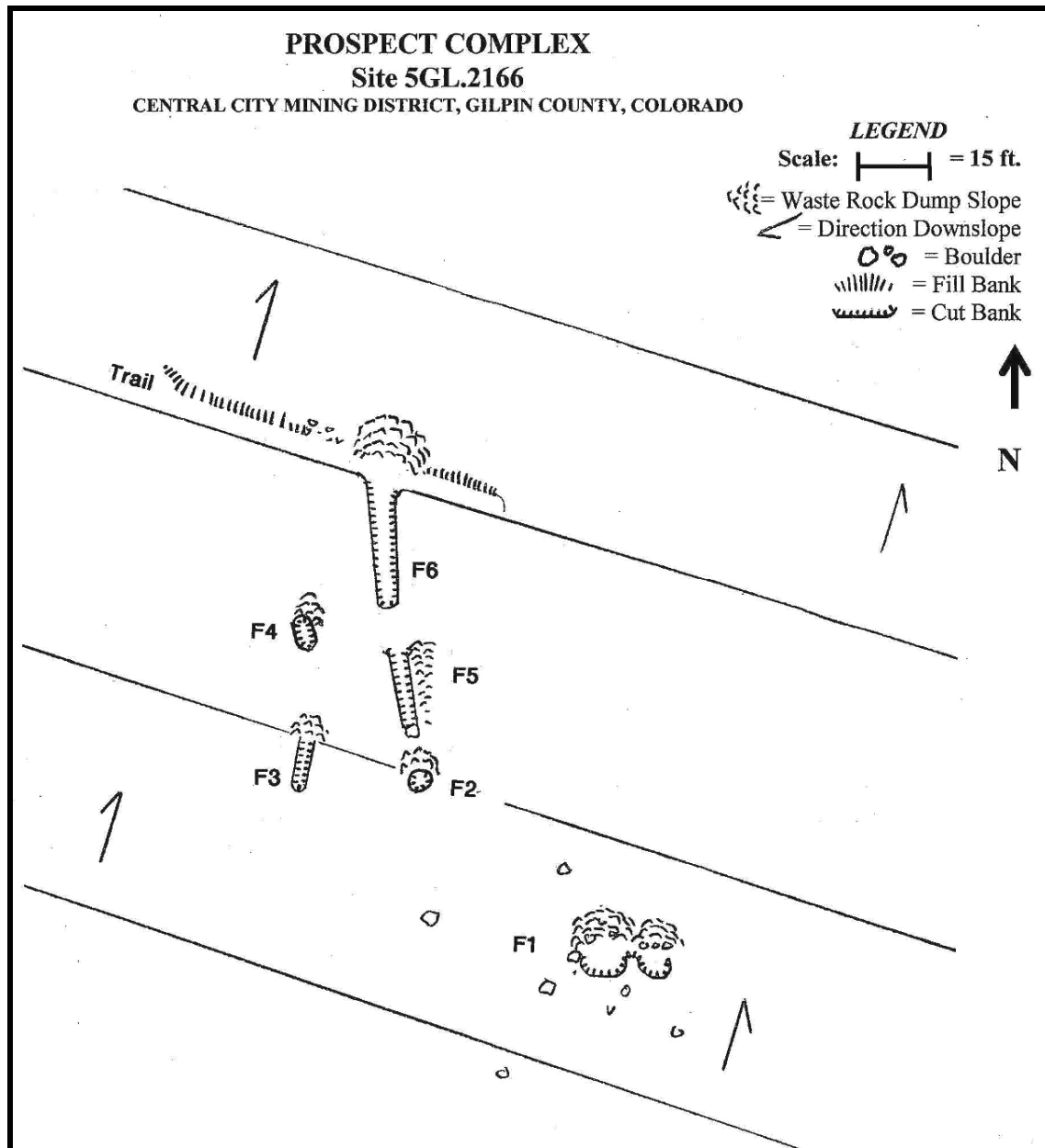


Figure 4.53: Plan view of Prospect Complex, 5GL.2166.

Prospect Complex History

The site's name could not be determined, and a name is necessary for research.

Prospect Complex Description

The prospecting party dug a haphazard cluster of pits and trenches in search of a vein. In the beginning, the prospectors shoveled out five pits and a trench (F1-F4) oriented roughly northwest-southeast. The pits range in size from 7'x11' in area and 2' deep (F1) to 5' in diameter and 3' deep (F2), while the trench (F3) is 5' wide, 11' long, and 3' deep. The prospectors encountered a mineralized seam in the center pit (F2) and determined that the seam trended north-northwest. To better examine it, they exposed a 57' long swath with two deep trenches. The smaller trench (F5) was 5' wide, 18' long, and 6' deep dug from between boulders. Downslope, the prospectors blasted the second trench (F6) into bedrock, creating an incision 7' wide, 30' long, and 6' deep. They used a wheelbarrow to shuttle waste rock out the mouth, depositing a mound 15'x15' in area and 3' thick.

The site lacks artifacts and buried archaeological deposits because surface prospecting tended not to generate materials in volume, and steep slopes provide a poor deposition environment.

Prospect Complex Condition and Integrity

The complex is in fair condition. All the excavations are well-defined and fairly intact, but erosion washed in their rims and deposited sediment 1' to 3' deep on their floors. Forest added a thick duff layer, as well.

The site retains only several aspects of integrity. The numerous prospects and their waste piles in a deep forest setting convey feeling of the search for ore. But the site's design is not abundantly clear because the pits are haphazard and a pattern difficult to perceive. The site never had structures or buildings, and materials and workmanship are thus irrelevant.

Prospect Complex Significance

The complex is significant as a contributing element of the landscape. The probes and their dumps add important small-scale detail, while the site is extensive enough to clearly convey a sense of prospecting. The site's visual presence is localized, the thick forest concealing the site from remote overviews.

The complex is recommended individually ineligible. Under Criteria A and B, association with important events, trends, and people is uncertain because archival research failed to find a site name or history. In terms of Criterion C, the site is not a good example of its resource type, a prospect complex. The pits are disorganized, scattered, and without clear pattern reflecting the prospectors' sampling strategy. Further, complexes with these qualities are among Colorado's most common mining resources. The site will also not yield important information upon further study because buried deposits, complex feature systems, and artifacts are absent.

Prospect Complex Management Recommendations

The Land Disposal will adversely affect complex. The resource is a contributing element of the landscape and lies on a BLM tract. Its transferal from federal domain to local government could pose a threat. Mitigation will be required.

Site 5GL.2167 Stamp Mill Remnant
Project: Land Disposal

During the early 1860s, a small and simple stamp mill at Chase Gulch's west end processed gold ore hauled over from Central City. Presently, the building's platform, partial foundations, and a few artifacts are left. Considering the early timeframe and importance of the resource type, a stamp mill remnant, the site is among the more significant around Black Hawk. The mill was located on the gulch's southwest floor at 8,510' elevation, south of Castle Rock. Quartz Creek trickles through a depressed channel lined with riparian habitat and stands of young aspens. Historic Chase Gulch Road (5GL.2126.1) passes through the site, and a wagon road (5GL.2170.1) probably used for delivering ore is a short distance east.

Stamp Mill Remnant History

The mill name could not be determined, and a name is necessary for archival research. A general history of early stamp milling discussed above with Site 5GL.2154 (Stamp Mill Foundation) does, however, provide general context. Figures 4.44 and 4.45 illustrate how the mill discussed here probably appeared.

Stamp Mill Remnant Description

The site encompasses a north-south series of platforms and foundations conforming in footprint to the areas' early 1860s stamp mills. As was common, most of the mill was built on flat ground, but its head ascended a short distance upslope so gravity could draw the ore through treatment stages. Workers shoveled crude ore into at the mill's head, which fed the material into a battery of stamps for crushing. The resulting product was screened, with fine slurry then flowing over amalgamation tables at the battery's toe. The stamps and tables were in the mill's main section on sound footing. The amalgam scraped off the tables was heated in a retort that volatilized and recaptured the mercury for use again, and the pure gold which remained was melted into ingots for shipment to Denver. The stamp battery was belted to a waterwheel supported by a stone foundation on the mill's east side. A flume traversing the slope above carried water to the wheel. Its possible source was a small dam (F6) in the Robert Ingersoll Placer (5GL.2162) northwest and up Chase Gulch. A faint and highly segmented line can be observed above the mill. This may be evidence of the flume, but the line is too ephemeral to qualify as a feature. Although overgrown and subtle, the site's features generally convey the mill's content and plan.

The mill's upper terrace (F1) provided a flat station where workers received crude ore from wagons and fed it into the stamp battery. Now faint and subtle, the terrace is a cut-and-fill platform 10'x20' in area with low cut-banks defining the south and west sides. A mix of young and old pines border the edges, and have dropped duff that conceals the surface.

The main mill building stood on a platform (F2) incised into the base of the mountainside. The platform was so incised rather than graded with cut-and-fill methods to provide a solid, firm surface for the building and heavy machinery. The platform is 33'x45' in plan with a distinct cut-bank 4' high. Although blanketed with duff and erosional sediment, a few

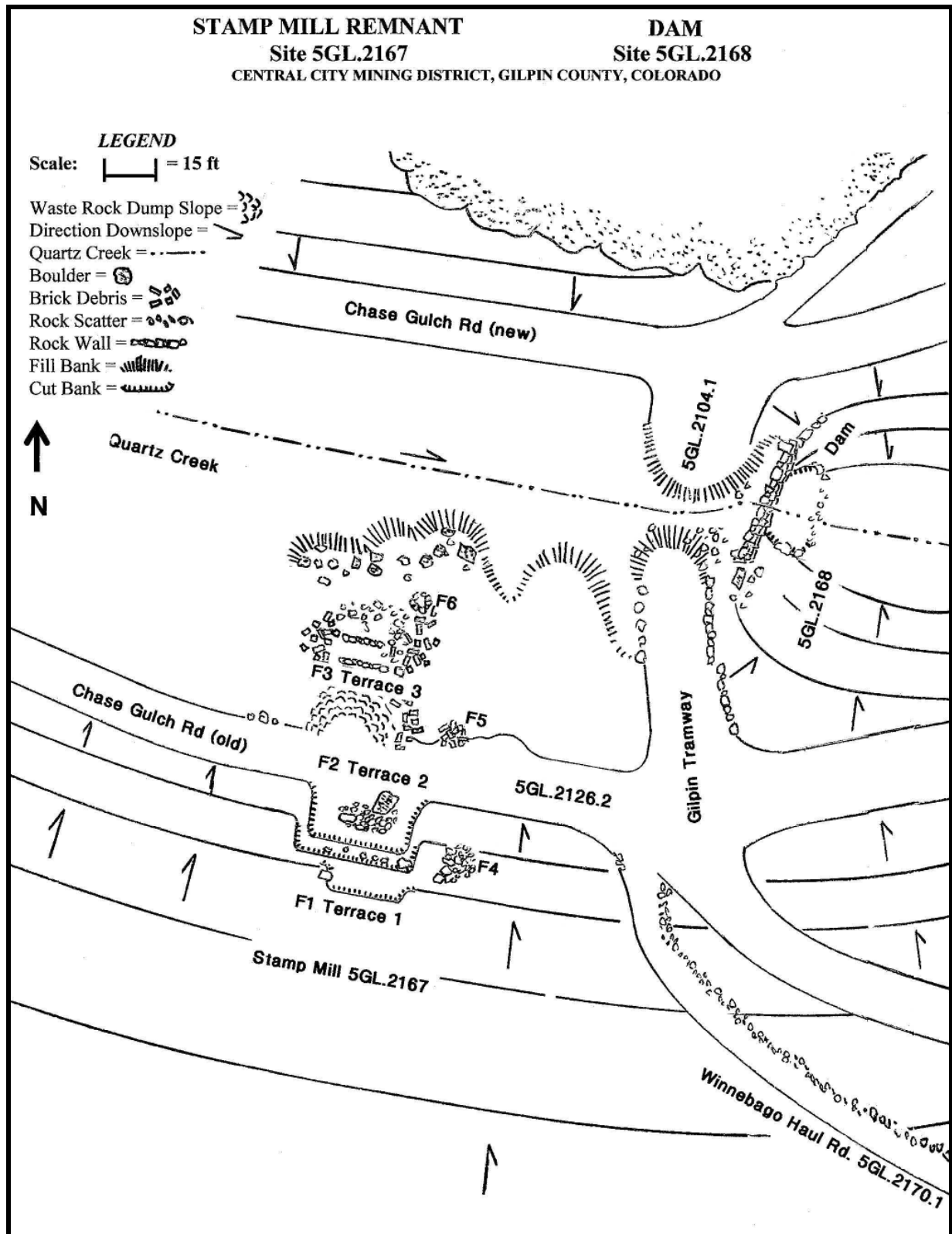


Figure 4.54: Plan view of Stamp Mill Remnant, 5GL.2167, Dam, 5GL.2168, and Winnebago Hill Haul Road, 5GL.2170.1.

foundation elements from the building and machinery are apparent. The cut-bank features a series of large rocks that supported the mill frame, most of the rocks having shifted over time. Collapsed remnants of a rock foundation lie mounded on the platform's south portion. The foundation was originally rectangular and probably supported the stamp battery, but is now a rubble mound 7'x14' in area and 1' high. The platform's northern end features a low mound of crushed rock 18' in diameter and 18" thick. Original Chase Gulch Road was graded across the platform's center circa 1903, and young pines have since taken hold.

The mill's lowest, northern terrace (F3) features a simple foundation that supported heavy timber framing. The foundation features an upper wall 18' across, middle wall 13' across, and lower rock alignment 10' across. The entire three-tier series is 15'x18' in plan, with the bottom 4' lower than the top. The two walls are 2' high. Rubble and bricks are scattered around, and duff conceals most of the surface.

A rock foundation (F4) stood adjacent to and east of the mill's head. The structure collapsed and became mound of cobbles and boulders 5'x9' in area aligned north-south like the rest of the mill. Erosional channels around the mound suggest that it anchored a waterwheel for motive power.

A water sump (F6) was countersunk into the slope near the mill building's northeast corner. Now filled with duff and rubble, the pit is circular, lined with dry-laid rocks, and 30" in diameter and 18" deep. The sump probably provided clean water for ore processing (Quartz Creek otherwise being fouled by placer mining upstream).

A pile of common bricks (F5) and several large rocks lies on the ground east of the mill. The pile is 4'x5' in area and could be the remnants of an amalgam retort or gold melting furnace. The bricks are very crude, irregular, and scorched.

The site offers a sparse artifact assemblage in addition to the the bricks. A few cut nails, sheet iron sections, crude window fragments, crude bottle glass, and hand-soldered hole-in-cap cans are scattered around the platforms.

Important, buried archaeological features and artifacts are very likely to be found in the site. Evidence of the mill building's footprint and machinery foundations may lie underneath the main platform's sandy surface, while artifact concentrations are probably scattered around its perimeter. Testing and excavation, guided by ground-penetrating radar, could provide information that would clarify the mill's design and exact timeframe.

Stamp Mill Remnant Interpretation

Material evidence strongly suggests that the mill was a simple water-powered amalgamation facility with a 10-stamp battery. The building was approximately 33'x60' in plan and L-shaped, with ore input at the upslope head, stamp battery and tables near center, and retort at the lower north end. The collapsed battery foundation corresponds in size to a 10-stamp type. The external foundation outside the mill's east side is where a waterwheel would most likely have been located, and scoured channels there confirm a sustained current. The site lacks evidence of a steam engine, although a small engine could have been mounted to a simple timber foundation. The bricks presently on-site could remain from a boiler. In general, the mill's footprint and size are remarkably similar to period stamp mills depicted in period photographs.

Circumstantial evidence strongly suggests an early 1860s timeframe. First, the facility was a simple stamp mill limited to crushing and amalgamation, the building offering no additional room for supplementary concentration appliances. Gilpin County mills predating 1865

were small, simple, and equipped only for amalgamation recovery. Later mills were larger and had concentration equipment absolutely required to process the complex ore mined by that time. Second, the facility was water-powered but sited in a drainage with an inadequate supply. Poor planning such as this was a characteristic of the early 1860s wave of mill construction, which led to failure. Later mills were more thoughtfully built along the North Fork of Clear Creek, a reliable water source. Third, the crude bottle and window glass, irregular bricks, and hand-soldered cans support an 1860s timeframe.

Stamp Mill Remnant Condition and Integrity

The site is in fair condition for an early 1860s archaeological resource. All equipment and major structural materials were removed long ago, and the site was then abandoned and the platforms exposed to extended weathering. An identifiable and interpretable assemblage of features and artifacts presently remains, with an expected level of deterioration. The main building platform and stamp battery foundation are apparent, but the platform's cut-banks have slumped, runoff has deposited a layer of sediment over its original surface, and the foundation collapsed and lost some of its form. The low rock walls defining the platform's north end are intact but subtle, blending in with the surrounding cobble-strewn slope. The ore receiving platform at the mill's head is also subtle, its cut-bank having relaxed and its surface blanketed with soil and duff. Revegetation is one of the most prominent and reversible challenges. Ponderosa pine and fir saplings are overtaking the platform and foundations, and are just beginning to conceal the site. The young trees also confound clear photography. In 1903, Chase Gulch Road was graded over the main platform's surface, with little effect.

The stamp mill remnant's integrity is mixed. With guidance, the facility's general plan (design) can be elicited from the platforms and foundations. The site has integrity of association with early 1860s stamp milling, and is located in an intact setting. But the archaeological features are too subtle and overgrown to convey feeling at present, and have no integrity of materials or workmanship.

Stamp Mill Remnant Significance

The stamp mill remnant is significant for individual eligibility and also as a contributing element of the landscape. Regarding the latter, the main building platform, stamp battery foundation, brick pile, and rock walls lend small-scale detail to the landscape. Visual presence is localized because of the sapling overgrowth.

The site is recommended individually eligible under Criterion A because simple amalgamation stamp mills were critical to the mining industry's success. The role of stamp mills was to provide local ore treatment and recover gold bullion, which was shipped to Denver and then banking houses in the Midwest. Local treatment was essential to the success of Gilpin County's mining industry because the ore was otherwise unprofitable to ship to plants in the East. The economy of Gilpin County, and indeed most of Colorado, was a function of a profitable mining industry during the early 1860s, and the industry was in turn dependent on stamp mills. The site retains enough integrity to convey its association with Criterion A.

The site is recommended eligible under NRHP Criterion D and SRHP Criterion E for its buried archaeological potential. When intact, the mill featured a stamp battery, its drive train, and amalgamation tables on substantial foundations. Similarly, the amalgam retort and gold melting

furnace also had foundations. Evidence of these, and the mill building itself, probably lie underneath the main platform's sandy surface. The platform's perimeter also almost certainly features a good assemblage of buried artifacts. Combined, the features and artifacts could enhance current knowledge of the site, and more importantly convey details regarding how early 1860s stamp mills were designed, built, equipped, and operated. The area of inquiry is important because stamp mills were critical to the success of mining in Colorado, and Colorado's history in general, and period sites are so rare. Few if any such sites have been documented at any level.

Stamp Mill Remnant Management Recommendations

The site is individually eligible, a contributing element of the landscape, and lies on a BLM tract. Disposal of that tract from federal to local government constitutes an adverse effect to the resource because federal protections are lost. Mitigation may be required.

The site should be preserved in its own right, and has high tourism potential because of its historical significance. A few actions are recommended for both preservation and presentation.

- Detailed documentation and archival research. The site should be recorded in yet greater detail for a better interpretive map and description. Archival research conducted for the site was extensive, and more time may determine the mill's name and full history. The information is needed for best interpretation and lasting record.
- Remove vegetation from site, under supervision.
- Route recreational use of Chase Gulch Road around the site.
- Interpret site.
- Improve the stamp battery foundation by returning scattered rocks.
- Conduct archaeological investigation as discussed above.

Stamp Mill Remnant Heritage Tourism Potential: High

The site has excellent tourism potential because of its importance, accessibility, interpretability, and buried archaeological features.

Interpret Site: Signs with a map can explain the site's archaeological features, and what the mill was like. The signs can then place this in the context of Black Hawk as early stamp milling center.

Interpretive Trail. The site would be a key stop on an interpretive trail following original Chase Gulch Road. The trail must be routed around the site itself.

Public Archaeology. The site's buried archaeological features and artifacts are highly likely to reveal important information about early stamp mills. Testing and excavation can be made a prominent event tying together the City of Black Hawk, its open space, and the public.

Site 5GL.2168 Dam
Project: Land Disposal

The dam was never designed as a water storage reservoir. Its primary purpose instead was to provide an elevated headgate for tapping water into a pipeline or flume contouring easterly to Chase Gulch placer mines and stamp mills (no trace remaining). The dam was well-sited for its function. The builders chose a natural cascade in Quartz Creek's channel, south of Castle Rock, for its narrow width, elevated fall, and solid rock footing. The creek descended roughly east-west into a natural catchment basin, and the dam crossed northeast-southwest immediately above. See Figure 7.54 above for a plan view of the dam.

The dam is more of a historic, engineered structure than an archaeological site because it is well-preserved, although flooding has washed away the brow. The creek still flows over the dam as a waterfall, and supports a riparian habitat bordered to the south by doghair fir and pine forest. Elevation is 8,510', and the entire resource lies on a BLM land tract.

The dam is at the center of a concentration other resources, mostly by coincidence. An early 1860s stamp mill remnant (5GL.2167) is west on the gulch floor. Present-day Chase Gulch Road (recent and unrecorded) extends east-west past the dam's north end, and original Chase Gulch Road (5GL.2126.2) past the south end. Winnebago Hill Haul Road meets historic Chase Gulch Road also at the south end. The Gilpin Tramway railroad bed (5GL.2104.1), the one directly related resource, purposefully crossed the creek at the dam, using the dam's elevation and surface to advantage.

Dam History

Extensive archival research found no information specific to the dam, but we can interpret a general function and age range from a few facts about the history of Chase Gulch. As noted above, the dam slowed Quartz Creek and provided an elevated head for diverting water into a pipeline or flume that contoured easterly to Black Hawk. Stamp mills were the primary consumers of water flumed to Black Hawk, both for motive power and ore processing. Although Black Hawk became Gilpin County's milling center during the early 1860s, most facilities were too small and under-financed to justify a large dam and water delivery system. But this changed by the late 1860s with a wave of mill construction. Black Hawk saw a second generation of plants large enough, with more mills completed during the 1870s. It seems highly likely that the existing dam was built during the late 1860s or 1870s with the second-generation mills. Additionally, the dam's masonry harkens to Cornish and Welsh methods, and these two British groups became influential in county construction projects beginning in the late 1860s. Several historic photos (Figures 7.14 and 7.15) post-dating 1900 illustrate the Gilpin Tramway railroad crossing over the dam. The railroad was constructed in 1886, and the dam was earlier.

Dam Description

Historically, the dam was 40' across and approximately 27' high, finished with a brow of rock masonry and logs. The brow diverted a specific volume of water into a headgate and flume, while the majority of Quartz Creek cascaded over a wide gap at center. The dam was professionally designed and built, which is why it has survived numerous floods. Workers first excavated soil to bedrock for a solid footing and then constructed the dam's face. To resist the

outward push of soil creep and force of floods, the dam was erected at a batter, the entire face leaning backward against the stream channel. Workers chose local metamorphic rock blocks ranging in size from 2'x3'x6" up to 2'x5'x18" as materials, and assembled them by stacking, interlocking, and nesting on fine sand as a mortar of sorts. The assembly method and half-ton weight of larger boulders provided stability and resisted washout.

The creek presently pours over the dam's center, marking the original overflow gap's location. Up-current, the stream approaches in a natural, cobble-lined channel 2½' wide, pours over the dam's face, and then collects in a pool 8'x20' in area and 2' deep impounded by a rubble blockade.

In 1886, the Gilpin Tramway routed its main line from Black Hawk to Central City through Chase Gulch, planning a horseshoe curve at Castle Rock. The railroad intentionally chose the dam as the stream channel crossing, building a simple bridge of log cribbing abutments and stringers carrying the track. The bridge was set back around 14' from the dam and around 6' higher, reflecting separate construction.



Figure 4.55: North profile of dam and Quartz Creek (5GL.2168). The dam face is at a batter, reclining leftward against the stream and soil creep. Workers chose large tabular rocks because they are heavy and fit together well.

Dam Condition and Integrity

The dam is in fair condition for a flood-prone structure more than 120 years old. The body of the dam remains largely as built, with Quartz Creek cascading over it. Soil creep has covered the north and south ends of the face and crest, while the creek promoted lush revegetation. Floods swept the brow away, leaving two of the original logs above a ragged row of large rocks. Most of the dam is, however, as-built.

The dam retains good integrity. Professional design is apparent from the purposefully selected topographic location, and the batter of the face. With intact rockwork whose boulders were chosen for size and shape, and then carefully integrated together, the dam also possesses integrity of materials and workmanship. The stream setting is good, and the dam supports the gulch's feeling of mining.

Dam Significance

The dam is both individually eligible and a prominent element of the landscape. Regarding the latter, the dam and its waterfall hold a strong sensory presence in Chase Gulch's western portion, being highly visible and audible from several recreational trails. The dam imparts the feeling of water use for industry.

The dam is recommended eligible under NRHP and SRHP under Criterion C as a good example of its resource type, a professionally designed and constructed water-diversion dam for mill power. Presently intact, the dam exhibits professional design in its location and angled face. The builder specifically sited the dam at a constriction in Quartz Creek with a high fall and exposed bedrock for a solid footing. He also ensured that the face reclined west and up-gradient to resist pressures of soil creep and flooding. Workers selectively chose tabular rocks weighting between 100 and 1,000 pounds and carefully fitted them together for a lasting structure stable even in flood. Timeframe is also a consideration, where mill dams dating to the 1860s and 1870s are very rare in Colorado.

At present, the dam is not recommended eligible under Criterion A. More research is needed to pinpoint its builder, timeframe, and specific historical associations.

Dam Management Recommendations

In terms of Section 106: the dam is recommended eligible, is also a contributing element of the landscape, and lies entirely on a BLM land tract. Conveyance of the tract from federal control to local government constitutes an adverse effect. Mitigation may be required.

The dam has high heritage tourism potential, and several considerations are suggested.

- Do not remove saplings and trees from dam's surface. Their root networks lend stability to the masonry and resist damage from floods.
- Prune willows growing on dam's north end. This increases visibility and promotes root growth.
- Conduct further research to determine builder, timeframe, and water consumers.

Dam Heritage Tourism Potential: High

The dam has high heritage tourism potential because of its importance, prominence, accessibility, and ease of interpretation. Management recommendations suggest interpreting the dam as part of Black Hawk's milling history.

Interpret Site: Signs can explain the dam's function, design features, and noteworthy aspects of its construction.

Site 5GL.2169 Belden Mill
Project: Basic Inventory

Among Black Hawk vicinity's more significant resources, the Belden Mill lies on the south floor of Chase Gulch a short distance east of the Belden Tunnel (5GL.7.12). David D. Belden commissioned the mill in 1887 to process ore from the nearby Belden Tunnel. His Belden & Tennal Mining Company drove the tunnel in 1875, produced heavily into the 1880s, and then stalled. He reorganized as the Winnebago Mining Company in 1886 or 1887 partly to finance mill construction. The mill was a stamp facility designed to recover free-gold via simple amalgamation, and almost certainly had additional appliances to concentrate complex gold-bearing material. The mill was apparently ineffective and experienced a brief life, possibly less than two years.

Belden Mill Description

When intact, the mill was a large, professionally executed stone masonry edifice 52'x74' in plan with a shed roofline, all characteristic of Gilpin County's Cornish architectural influence. Inside, the mill contained machinery to crush, grind, screen, and concentrate gold ore, mostly bolted to an interior timber frame. Designed for adaptation, servicing, and replacement of timbers, the frame was structurally separate from the walls, freestanding in the interior. The mill's north-south orientation and adaptable framework attest to the involvement of a professional engineer or metallurgist. The mill is a contributing element of Chase Gulch's landscape and individually eligible.

Presently, the mill's remains consist of a stone shell with four walls, no roof, and no interior woodwork. The walls are 2' thick and constructed of locally excavated metamorphic blocks around 8"x10"x6" in size, mortared with Portland cement. Foundation blocks are larger. Although none of the blocks had been dressed, faced, or otherwise improved, workers expertly fitted them together creating relatively tight joints. When arranging the foundation and crown blocks, workers inset sockets to hold timber footers and a series of 2"x10" roof rafters. Most of the mill's interior framing, flooring, and wooden fittings were, however, completely separate and freestanding, the walls merely surrounding them. The north wall (front) is 13' high and the south 28' high.

All walls feature doorways and windows with lintels and framing integrated into the masonry. The west wall features four 40"x72" windows and a 42"x88" doorway descending in alignment with the roof's fall-line. The east wall has four similar windows and a 78"x106"

doorway with an arched crown. The south wall features a row of five 42"x54" ore input ports near the top, and a sixth port probably for waterpower. The north wall features three windows and a 74"x92" doorway.

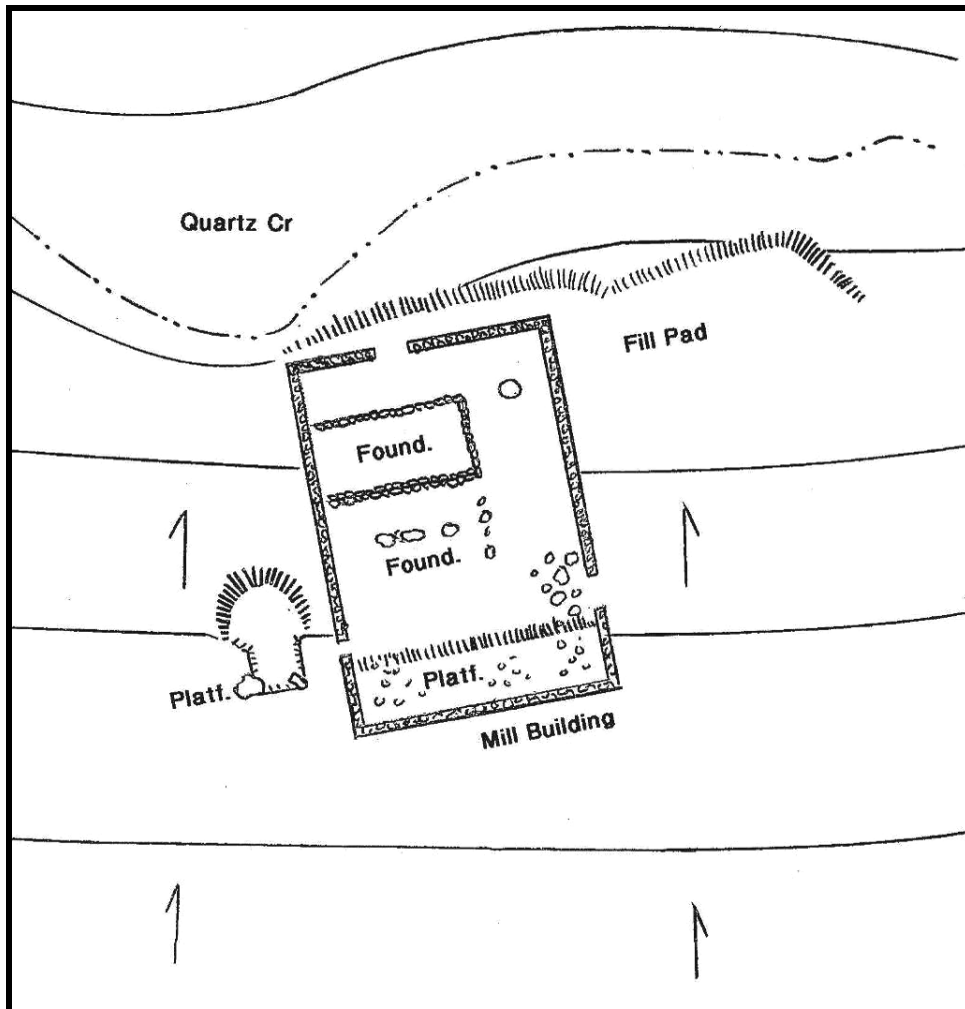


Figure 4.56: Plan view of the Belden Mill, 5GL.2169.

Interior structural elements are few. Remaining archaeological features represent general aspects of the ore treatment process. Heavily overgrown with fir trees, the interior features a series of three rock foundations and four terraces, which at one time supported framing and process machinery. The rear terrace is 10' higher than the front, reflecting the use of gravity to draw ore through the process stages. Rubble and duff blanket the ground, concealing artifacts and small-scale features such as machine foundations and anchor bolts.

The site possesses only a handful of surface artifacts, with soil creep, duff, and moss having concealed most items. Several timber bolts, cut nails, window glass fragments, and cast iron pieces are scattered around the north half.

The site has excellent potential for buried archaeological deposits and features. Further, the deposits and features are probably significant for their ability to convey design, equipment,

and processes of circa 1880s gold concentration mills. Rubble, soil, and duff in the mill interior presently bury framework and machinery foundations, as well as artifacts. More artifacts are almost certainly distributed underneath more soil and duff around the mill's north half, where gentle slopes provide a good deposition environment.

Belden Mill Condition and Integrity

The stone walls and remaining woodwork are in fairly good condition but overwhelmed with thick, young dog-hair fir and aspen forest. Because of the mill's expert construction, the walls still stand vertical with little settling except in the northwest corner. There, Quartz Creek flows no more than 6' away, and floods have undermined the foundation. The corner is sagging which has created separation fissures in the north and west walls, which will collapse if this is not addressed. In addition, pillars between several of the ore-input ports in the rear, south wall have fallen in.

The mill possesses excellent integrity as an archaeological resource. The stone shell clearly conveys its design, materials, and workmanship, while the interior terraces and foundations impart general design of the ore treatment process. If exhumed, buried archaeological features are likely to enhance integrity of process design. The resource also has integrity of association and setting.

Belden Mill Significance

The Belden Mill is both a contributing element of the landscape and individually eligible for the NRHP and SRHP in its own right. In terms of landscape, the mill's contribution is presently subtle. The thick forest conceals the walls from view until the observer is directly north of the site, on Chase Gulch Road. From this vantage point, closer examination reveals the building's impressive size and construction.

The mill can be eligible under NRHP and SRHP Criteria A and C in the areas of Architecture, Engineering, and Industry. Under Criterion A, the mill was an important component of the greater Winnebago Mining Company operation, which produced ore and ran the mill 1887-1888. The mill was important for several reasons. First, it generated gold bullion in its short life, before failing as the ore became too complex. Second, it was one of many failures through which metallurgists learned effective versus inappropriate processing methods.

In terms of Criterion C, the mill is a good archaeological example of two trends. First is Cornish-influenced mill engineering, including an interior support frame for machinery that stood separate from the walls. Second, the mill embodies an adaptation of traditional Cornish materials and workmanship. This latter trend occurred primarily in Gilpin, Clear Creek, and Boulder counties, where Cornish immigrated and were influential 1860s-1880s.

The mill could be eligible for NRHP Criterion D and SRHP Criterion E because its buried archaeological features and artifacts are likely to reveal important information regarding 1880s ore treatment methods and engineering.

Belden Mill Management Recommendations

- *The Belden Mill is among the more important resources around Black Hawk.*
- Emergency stabilization of settling and cracked northwest corner is required. Redirect

channel of Quartz Creek, or erect water deflection bank next to mill. May involve U.S. Army Corps. If so, work could serve as cultural resource mitigation for adverse effect finding in Quartz Valley Reservoir project.

- Cracks in northwest corner might be repaired with shot-crete injection or steel plates and masonry bolts. May require concrete injection underneath footer.
- Repair collapsed masonry pillar in south wall, using compatible materials and workmanship.
- Intensive documentation and archival research. Includes formal significance evaluation. This is necessary for heritage interpretation.
- Thin vegetation around perimeter. Stumps to grade. The mill will then be visually prominent from vantage points on Chase Gulch Road a short distance north.
- Thin vegetation in interior.
- Clean rubble out of interior, under supervision of a qualified monitor.
- Interpret with signage. Topics include mill history, ore treatment process, Cornish architectural influence typical of Gilpin County.
- Archaeological testing. A planned pattern of test pits in and around the mill may reveal important buried artifacts and features. The information would enhance an understanding of the facility, and serve as a meaningful contribution in the study of ore treatment technology.

Belden Mill Heritage Tourism Potential: High

The Belden Mill's potential is high because of its historic importance, architectural significance, and prominent and accessible location. An icon of Black Hawk's milling industry, the mill is a priority for interpretation. The gently sloped terrain around the stone shell, and wide doorways in all but the south wall, make the site easily accessed, including by people with mobility limitations.

Interpretive Signage can explain the mill's importance to the 1860s mining industry, as well as how the mill functioned, and the influence of Cornish in Gilpin County's mining architecture.

Interpretive Loop Trail. The mill is an important stop on a proposed interpretive loop trail involving the Dam (5GL.2168) and Belden Tunnel (5GL.7.12). The route would begin at the dam and follow original Chase Gulch Road east along the gulch floor to the Belden Tunnel. The trail continues to the mill and curves north to present-day Chase Gulch Road. All three resources can be interpreted.

Public Archaeology. The site's buried archaeological features and artifacts are highly likely to reveal important information about early mills. Testing and excavation can be made a prominent event tying together the City of Black Hawk, its open space, and the public.

Linear Resource 5GL.2170.1
Project: Land Disposal

Winnebago Hill Haul Road

During the early 1860s, mining companies, freight haulers, community supporters, and Gilpin County all contributed to a network of wagon roads connecting Black Hawk and Central City. The network was essential for the efficient movement of freight and people, and especially ore down to Black Hawk and mining supplies back up. Several routes primarily for ore known as haul roads and quartz roads crossed north from Central City over Winnebago Hill and down into Chase Gulch. Once there, the roads joined original Chase Gulch Road, a main artery to the mills in north Black Hawk.

One of those early quartz roads is the Linear Resource discussed here, and named Winnebago Hill Haul Road for its location and function. The road was a one-way segment in a larger network on the hill's north flank. The network included several roads ascending to the hill's summit from Central City, and a main road contouring east-west along the hill's north shoulder. The Winnebago Hill Haul Road connected the shoulder with a historic intersection on the gulch floor south of a diversion dam (5GL.2168). A branch road (5GL.2170.2) served as a shortcut between several mines on the shoulder and the haul road. The haul road and branch provided a one-way descent into the gulch, being too steep for the reverse direction.

Winnebago Hill's north flank is extremely steep, north-facing, and thickly overgrown with third-growth doghair fir forest. The road's start point is 8,680' elevation and its end in the gulch is 8,500' elevation, the last 40' crossing a BLM tract. The remainder crosses open space.

Winnebago Hill Haul Road History

Extensive archival research found a brief mention of the road's use by a *Rocky Mountain News* reporter visiting the Sterling Mill (5GL.2169) in 1866.⁴³ The reporter simply noted crossing over Winnebago Hill into Chase Gulch, turning east, and reaching the mill. Assuming that the reporter was not traveling cross-country, he had to have descended the haul road. Although the road's construction year is presently unknown, it was likely in service during the early 1860s when wagons hauled ore to a number of mills in Chase Gulch's mouth. The road was in use at least until 1888, when the Gilpin Tramway began freighting ore from Central City to Black Hawk.

Winnebago Hill Haul Road Description

The road begins on Winnebago Hill's north crest and descends steeply west 1,130' to the intersection at dam. Travel was one-way down, the road being too steep for ascent. The road is best described respective of travel direction, in eight segments divided by natural features and mines.

⁴³ *Rocky Mountain News* 12/17/66 p1 c2.



Figure 4.57: The enlarged topographic map provides an overview of Winnebago Hill Haul Road, 5GL.2170.1, its branch, 5GL.2170.2, and original Chase Gulch Road, 5GL.2126.2. The polygons are associated mines. 5GL.7.12 = Belden Tunnel; 5GL.299 = Ellery Shaft; 5GL.2202 = Black Quartz; 5GL.2203 = Centre Midlevel Tunnel; 5GL.2205 = Ranney Mine.

Segment 1 begins where the road first becomes identifiable high on Winnebago Hill's north crest. The segment traverses a steep, east-facing slope with sandy soil, granite outcrops, and older second-growth ponderosa pines. At one time, the road featured a tread about 7' wide graded with cut-and-fill methods, retained in places by large granite rocks. Storm runoff, however, heavily eroded the edges and washed sediment across the surface. Barely discernible, the bed is now faint, 6' wide, and blanketed with sand. The segment extends 120' and changes character as it wraps around a prominent point on the slope.

Segment 2 begins where the road curves northwest around a point and exhibits its original design, materials, and workmanship. The road contours across a steep, northeast-facing slope whose young fir forest and dense cobble soil holds the roadbed in place. The bed is 8' wide and consists of cobble and boulder base capped with sand and soil, retained by a dry-laid rock wall 1' to 2' high. The tread is 6' wide and well-preserved, although saplings grow through the surface. After 113' the segment reaches a prospect complex (unrecorded) and changes character again.

Segment 3 descends sharply and extends 50' through a prospect complex. The road crosses the waste rock dump derived from a prospect shaft now completely collapsed. The tread is 10' wide.

Segment 4 leaves the prospect complex and descends westerly at a very gentle angle. The bed is 8' wide and graded with cut-and-fill methods, rubble being used as a base and paved with sand and soil. A dry-laid rock wall reinforced by loose rocks stacked along its outside edge retains the tread, presently 6' wide and well-preserved. Near the segment's east end, traffic wore the surface away and exposed several rough bedrock outcrops. After 140', the segment ends where the road abruptly changes pitch.

Segment 5 abruptly changes pitch from a gentle to a radical westerly descent, as much as a 20 percent grade. Design, materials, and workmanship are like the other segments, with larger cobbles used in the retaining wall. The tread is becoming overgrown with saplings and blanketed with duff and rubble from upslope. The segment is 195' long and ends where the road passes by the Centre Mine's Midlevel Tunnel (5GL.2203).

Near the west end of the steep pitch, *Segment 6* crosses the toe of the Midlevel Tunnel's waste rock dump. An intersection with a branch haul road (5GL.2170.2) is on the dump's west side, where the segment ends. The stretch through the mine is 55' long and the tread 6' wide.

Immediately after leaving the Midlevel Tunnel, *Segment 7* relaxes in pitch and continues 100' west through the Black Quartz Mine (5GL.2202), a small shaft. The bed is 9' wide and constructed with the same design, materials, and workmanship as the previous segments. The tread is 7' wide and becoming overgrown but is well-preserved.

The last segment descends gently from the prospect complex to an intersection with the Gilpin Tramway grade (5GL.2104.1) and original Chase Gulch Road (5GL.2126.2), the road's northwestern end. The bed is 10' wide and constructed as above, and the tread is 7' wide and becoming thickly overgrown with fir saplings.

Winnebago Hill Haul Road Interpretation

The road is a good example of the mining district's professionally-constructed ore hauling routes, sometimes labeled quartz roads on historic maps. Planning for long term use by heavy wagons, workers graded the bed with cut-and-fill methods. They first created a firm bed with exhumed rocks retained by dry-laid walls. The workers then paved the rubble with gravel and sand to make a flat and well-drained tread. Width was 6' to 7', a standard for large wagons. The road is overgrown yet serviceable today because of the quality of its construction.

The road also hints at the complexity of the system between Central City and Black Hawk. The haul road and its branch (5GL.2170.2) were a one-way route from the Winnebago Hill mines to the Black Hawk mills. Wagons loaded ore at the mines, traveled connectors to the Winnebago Hill roads, descended into Chase Gulch, and continued to Black Hawk. There, they loaded supplies and returned to the mines, but via a different route with gentle ascent, probably in Gregory Gulch. The Winnebago Hill roads were apparently segments in a greater system of loops designed for specific traffic patterns.

Winnebago Hill Haul Road Condition and Integrity

The Winnebago Hill Haul Road as recorded is in good condition. The bed and its cut-banks and rock walls are well-preserved, and the tread features its original surfaces. Saplings are, however, beginning to encroach in from the sides. Sheetwash erased the road's final connections with other routes on Winnebago Hill's summit.

The road possesses sound integrity. Design of the route is readily apparent, and design of the bed, with its cut-and-fill construction, cobble base, and sandy tread is clear. The road also retains integrity of materials and workmanship. Descending through a mining landscape, the road also has association and feeling of mining district transportation.

Winnebago Hill Haul Road Significance

The road is eligible as an individual resource and is also a contributing element of the landscape. The road contributes as a visible ore hauling route connecting Winnebago Hill's crest with original Chase Gulch Road on the gulch floor. The road's path through the forest and up the hillside is apparent, with the rock walls adding small-scale detail.

The road is recommended individually eligible under NRHP and SRHP Criterion A for its role in the mining industry. The road was an important means for freighting ore from Central City mines, and especially those on Winnebago Hill, to the Black Hawk mills. Wagons continuously fed the mills via the road from the early 1860s through late 1880s, when the Gilpin Tramway railroad subsumed most haulage.

The resource is recommended eligible under Criterion C as a good example of its resource type, a professionally built ore hauling road. The resource embodies characteristics such as a quality bed with cobble basement, rock retaining walls, sandy tread, and width of 6' to 7'. The steep pitch also reflects one-way traffic, a common pattern designed to avoid conflict.

In terms of NRHP Criterion D and SRHP Criterion E, the road will yield important information upon further study. In particular, the road is an important component of a larger transportation network tying Central City to Black Hawk. In the network, roads ascended from Central City up to an artery road contouring east-west along Winnebago Hill's summit. The Winnebago Hill Haul Road connected the summit with original Chase Gulch Road on the gulch floor. Chase Gulch Road was another artery with feeder roads extending outward along both sides to various destinations including mines and centers of logging. Some routes known as quartz roads were designed for one-way ore traffic, others for in-bound freight, and yet more for multiple uses. A study of the network based on archival research and documentation of individual roads will shed light on the transportation system fundamental to the Central City district. The findings could be extrapolated to other mining regions.

Winnebago Hill Haul Road Management Recommendations

In terms of Section 106, Winnebago Hill road is individually eligible and a contributing element of the landscape. The road's lower 40' traverse a BLM land tract. Transfer of the tract from federal to local government is an adverse effect. Mitigation may be required.

The road also provides excellent heritage tourism opportunities and should be preserved in its own right. The greatest opportunity involves adapting the road into a segment connecting several interpretive loop trails. Suggestions include:

- Detailed archival research may provide the road's name and construction date.
- Remove saplings on road tread. Thin trees along upslope, south side. Stumps to grade.
- Road naturally becomes a ready-made trail.
- Interpretive sign on Gilpin Tramway grade explaining road history.

Winnebago Hill Haul Road Heritage Tourism Potential: High

The road provides opportunity because of its strategic location and potential as a connector in the proposed Winnebago Hill Haul Road loop trail. The road's lower half provides a feeling of seclusion and discovery, while the upper half has excellent vantage points.

Winnebago Hill Haul Road. The loop begins on Chase Gulch Road near the dam. The trail ascends east up Winnebago Hill Haul Road to Winnebago Hill's north point, and then follows a wagon road (unrecorded) contouring west to the Ranney Mine. Trail users can descend back to start on another road, or continue on the wagon road to Robert Ingersoll Pipeline, and then back to the start.

Interpretive Signage can explain history of the road, the greater network, and reliance on wagon transportation.

Linear Resource 5GL.2170.2 Winnebago Hill Haul Road
Project: Land Disposal

The road described here was a short connector linking a multi-use wagon road on Winnebago Hill's north shoulder with the main Winnebago Hill Haul Road (5GL.2170.1). The connector begins at the Ranney Mine (5GL.2205), 8,680' elevation, and descends 400' through deep forest on the hill's north flank to the main haul road. Surrounding slopes are extremely steep, north-facing, and studded with granite outcrops and boulders. See Figure 4.57 above for a route map.

Winnebago Hill Haul Road Description

The short connector can be described in three segments respective of the downward direction of traffic. The first and highest *Segment 1* begins on the Ranney Mine's small waste rock dump, descends north-northeast 65', and ends at a prospect complex (unrecorded), where it transitions into *Segment 2*. The grade was professionally built with cut-and-fill methods. Workers cut half from the slope and used exhumed boulders and cobbles to build a retaining wall for the downslope fill-bank. They also poured cobbles behind the wall as a base for the roadbed. The tread is 7' to 7½' wide and the bed 10' wide, including the rock wall.

Segment 2 begins in the prospect complex (unrecorded) and continues its steep north-northeast descent. In the complex, workers carefully graded the road around a particularly large pit, 24' in diameter, with additional cut work and a rock retaining wall 3' high. The road then descends steeply in an unbroken pitch approximately 290' to a sharp curve. There, someone dug a prospect pit (6'x9' in area and 3' deep) into the tread, preventing further use. The pit was probably excavated after the road was abandoned. The segment's construction methods, workmanship, and dimensions are the same as above.

Segment 3 finishes the road, curving sharply northwest and joining the main Winnebago Hill Haul Road. The curve is 45' long, its tread flaring from 7' to 15' wide at the intersection. Wagon traffic turning onto the main haul road created the flaring width.

Winnebago Hill Haul Road Condition and Integrity

The road is very well preserved and in good condition end to end. The bed and its cut-banks and rock walls are intact, and the tread features its original surfaces. Saplings are, however, encroaching from the sides and taking hold of the surface.

The road possesses sound integrity because of its preservation. Design of the route is readily apparent, and design of the bed, with its cut-and-fill construction, cobble base, and sandy tread is clear. The road also retains integrity of materials and workmanship. Descending through a mining landscape, the road also has association and feeling of mining district transportation.

Winnebago Hill Haul Road Significance

As an individual resource, the road is eligible. It is also a contributing element of the landscape. The road contributes as a visible ore hauling route connecting Winnebago Hill's crest with the main haul route on the hill's north flank. The road's path through the forest and up the hillside is apparent, with the rock walls adding small-scale detail.

The road is recommended individually eligible under NRHP and SRHP Criterion A for its role in the mining industry. The road was an important means for freighting ore from Central City mines, and especially those on Winnebago Hill, to the Black Hawk mills. Wagons continuously fed the mills via the road from the early 1860s through late 1880s, when the Gilpin Tramway railroad subsumed most of haulage.

The resource is recommended eligible under Criterion C as a good example of its resource type, a professionally built ore hauling road. Characteristics such as a quality bed with cobble basement, rock retaining walls, sandy tread, and width of 6' to 7' are apparent in the road. The steep pitch also reflects one-way traffic, a common strategy used at the time to avoid conflict.

In terms of NRHP Criterion D and SRHP Criterion E, the road will yield important information upon further study. In particular, the road is an important component of a larger transportation network tying Central City to Black Hawk. In the network, roads ascended from Central City up to an artery road contouring east-west along Winnebago Hill's summit. The Winnebago Hill Haul Road connected the summit with original Chase Gulch Road on the gulch floor. Chase Gulch Road was another artery with feeder roads extending outward along both sides to various destinations including mines and centers of logging. Some routes known as quartz roads were designed for one-way ore traffic, others for in-bound freight, and others for multiple uses. A study of the network based on archival research and documentation of individual roads will shed light on the transportation system fundamental to the Central City district. The findings could be extrapolated to other mining regions.

Winnebago Hill Haul Road Management Recommendations

In terms of Section 106, Winnebago Hill road is individually eligible and forms a contributing element of the landscape. The road middle crosses a BLM land tract. Transferal of the tract from federal to local government is perceived as an adverse effect. Mitigation may be required.

The road has the same heritage tourism potential and opportunities as the main haul route described above. The same general management recommendations thus apply.

IF 5GL.2171 Dean Prospect Complex
Project: Land Disposal

The Dean Prospect Complex is an Isolated Find limited to a collapsed prospect shaft and an adjacent prospect trench on a BLM land tract. In traditional cultural resource reports, Isolated Finds (IF) are usually discussed in their own section, but the Dean complex is discussed here because it is large and substantial enough to be evaluated in the landscape. The IF is on Winnebago Hill's summit amid a confusion of other prospects that were not recorded because their historical association and ownership are unknown. The shaft itself was sunk into the northeast end of the Dean claim, but some of its waste rock and subsidence extend northwest onto a tiny BLM tract. In open meadow, the Dean and surrounding prospects are visible from the county road to the south.

Dean Prospect Complex History

No information specific to the shaft could be found. According to the claim's unusual size of 50'x300' in plan, the Dean was staked prior to 1872. Until that time, Gilpin County hardrock claims were commonly 50' wide and in 100' increments along a vein. In 1872, the Colorado state legislature defined a standard 300'x1,500' claim size applicable throughout Colorado Territory. As of 1875, James F. Bond owned the Dean and had probed it with several shallow excavations. Archival research found no further information.

Dean Prospect Complex IF Description

The Dean complex is limited to a prospect shaft and an adjoining prospect trench. Together, both cover a 25'x54' area. The shaft long ago collapsed and is now a subsidence crater 13'x22' in area and 9' deep. The dump is L-shaped, and 25'x32' in area and 3' thick around the shaft's southern and western sides. Most of the dump has slumped into the shaft. At some point, local residents threw iris corms into the subsidence, and the irises now thrive. The trench extends northeast and is 7'x14' in area and 2' deep. Its dump, which extends to the southeast, is 9'x14' in area and 2' thick.



Figure 4.58: In the westerly overview of Winnebago Hill's summit, the Dean is the small, pale dump at lower left.

Dean Prospect Complex IF Eligibility Recommendations

The Dean Prospect Complex is significant as a contributing element of the landscape. The Dean's waste rock dump and shaft subsidence are among the most visually prominent prospect features on Winnebago Hill's central crest, and they are evocative of the district's 1870s mineral exploration phase.

Considered individually, the Dean is recommended ineligible. Under Criteria A and B, a firm date could not be established, and archival research found no information. The IF's historical associations are therefore uncertain. In terms of Criterion C, the Dean is not a good example of its resource type, a prospect complex, because it lacks character-defining features and artifacts. The Dean will also not yield important information upon further study.

Dean Prospect Complex IF Management Recommendations

The Dean is significant as a contributing element of the landscape, and lies in part on a BLM land tract. Conveyance of that tract from federal to local government is an adverse effect because federal control and protections are forfeited. Mitigation may be required.

In terms of heritage tourism, the Dean is a good landscape element but has no interpretive value. Improvements are not warranted.

Site 5GL.2172 *Queen of the West Tunnel*
Project: Land Disposal

The Queen of the West Tunnel was an important component of a larger mining operation by the same name. During the mid-1870s, the owner bored the tunnel southwest along the Queen of the West Vein, trending through Winnebago Hill. He sited the tunnel at Winnebago Hill's northeast base, on the southwest side of Chase Gulch floor, near the gulch's midpoint. In 1884, he sank the Queen of the West Shaft (5GL.301) upslope on the hill's northeast flank to intersect the tunnel, and kept following the vein downward to great depth. The tunnel is presently an archaeological site in an advanced state of deterioration, and difficult to photograph.

The site lies on a border between two different environments on the gulch floor. Quartz Creek, a short distance northeast of the site, supports a subalpine riparian habitat. Winnebago Hill rises to the southwest, featuring extremely steep slopes choked with doghair pine and fir forest, and studded with bedrock outcrops and boulders. The Queen of the West Shaft is above and southwest of the tunnel. Elevation is 8,370', and the site's southeastern tip is on BLM land.

Queen of the West Tunnel History

The Queen of the West was developed early in Colorado's history and produced intermittently for decades. A prospecting party discovered the Queen of the West Vein in 1861, claimed it, and gouged out rich surface ore from several shallow shafts. Following the pattern common among the county's young mines, activity ended around 1865 when the party exhausted the easily milled free-gold ore. Plenty of complex material remained deep underground within the vein, but it was left in place because it was unprofitable at the time.

August R. Meyer thought enough of the ore to take ownership of the property during the late 1870s. Meyer was a professionally trained engineer and metallurgist from Germany, and he built a mill at Alma, Park County, in 1875. When the Leadville excitement began in 1877, Meyer secured backing from a St. Louis firm and organized the Harrison Reduction Works, one of Lake County's earliest and most efficient smelters. Also a savvy investor, he established the Meyer Mining Company at the same time and bought a number of good Leadville mines. According to archival sources, he purchased the Queen and other Gilpin properties around that time also.⁴⁴

Although Meyer may have never personally worked the Queen, he did understand how to properly develop the vein. During the late 1870s, he commissioned the Queen of the West Tunnel to undercut the known ore-bearing section on Winnebago Hill and allow miners to work it from the bottom up. When the best ore had been extracted by the early 1880s, Meyer leased the property out and, in 1884, began a main shaft to intersect the tunnel and continue deeper into the vein. A high water table forced Meyer to suspend work, and distracted by his large smelter projects, he let the Queen go idle for years.⁴⁵

Advanced in his years, Meyer retired from his field and began divesting his lesser mining properties, including the Queen in 1897. H.J. Stephens of Denver assumed that if Meyer had owned the mine, it must have high potential, so he bought it for \$20,000. Stephens hired L.L. Moe as manager and pursued a long-term development campaign. Moe installed a friction hoist and 80 horsepower boiler over the main shaft, began sinking it to 700', and had two shifts of miners block out ore on Levels 3 and 5. By 1900, Stephens realized regular production from

⁴⁴ *Mineral Claim Survey Plat: Queen of the West.*

⁴⁵ *Rocky Mountain News* 4/24/84 p3 c2; *Rocky Mountain News* 5/1/84 p6 c2; *Rocky Mountain News* 10/25/84 p8 c1.

Level 7, as well. Very confident in the quality of the entire vein, he purchased the Robert Emmett Mine (5GL.7.11) across the gulch on Maryland Mountain. The Robert Emmett was an adjoining claim. Stephens then ran both mines until the best ore was gone, and then sold to B. Barnard around 1908.⁴⁶

Barnard worked the Queen's upper levels through the tunnel for several years, at first ignoring the shaft because unwatering it was too costly. But then, when the upper levels became exhausted, Barnard was forced to pump out the shaft or close the mine altogether. He started the pumps up in 1911, using the tunnel as a drain into the gulch, and evaluated the lower workings once accessible. The effort proved to be fruitless because the deeper ore was too low in grade, and Barnard suspended operations and allowed the shaft to fill back up again.⁴⁷

Queen of the West Tunnel Description

The Queen tunnel is a simple archaeological site limited to the tunnel portal, its dumps, and faint remnants of a tunnel house and ore bin. The tunnel (F1) extended approximately 1,500' along the Queen of the West Vein, passing well beyond the Queen shaft (5GL.301). After the mine closed in 1911, the tunnel portal collapsed and became a subsidence scar 15'x33' in area with no original form.

Using ore cars on a track, miners disposed of waste rock in two locations. At first, they poured material (F2) along the slope north and south from the tunnel. Over time, they built up a bench of two lobes 47' wide, 162' long, and 15' thick. The surface is now thickly overgrown with fir and pine saplings, and blanketed with erosional sediment and duff.

⁴⁶ Callbreath, 1899; Colorado Mine Inspection Report: Queen of the West; *Denver Times* 11/27/99 p3 c3; *Denver Times* 4/18/1900 p10 c2; "Mining News" *EMJ* 7/23/98 p106; "Mining News" *Mining Reporter* 5/23/01 p344.

⁴⁷ *Mineral Resources*, 1909:315; *Mineral Resources*, 1910:414; "Mining News" *EMJ* 10/28/11 p864.

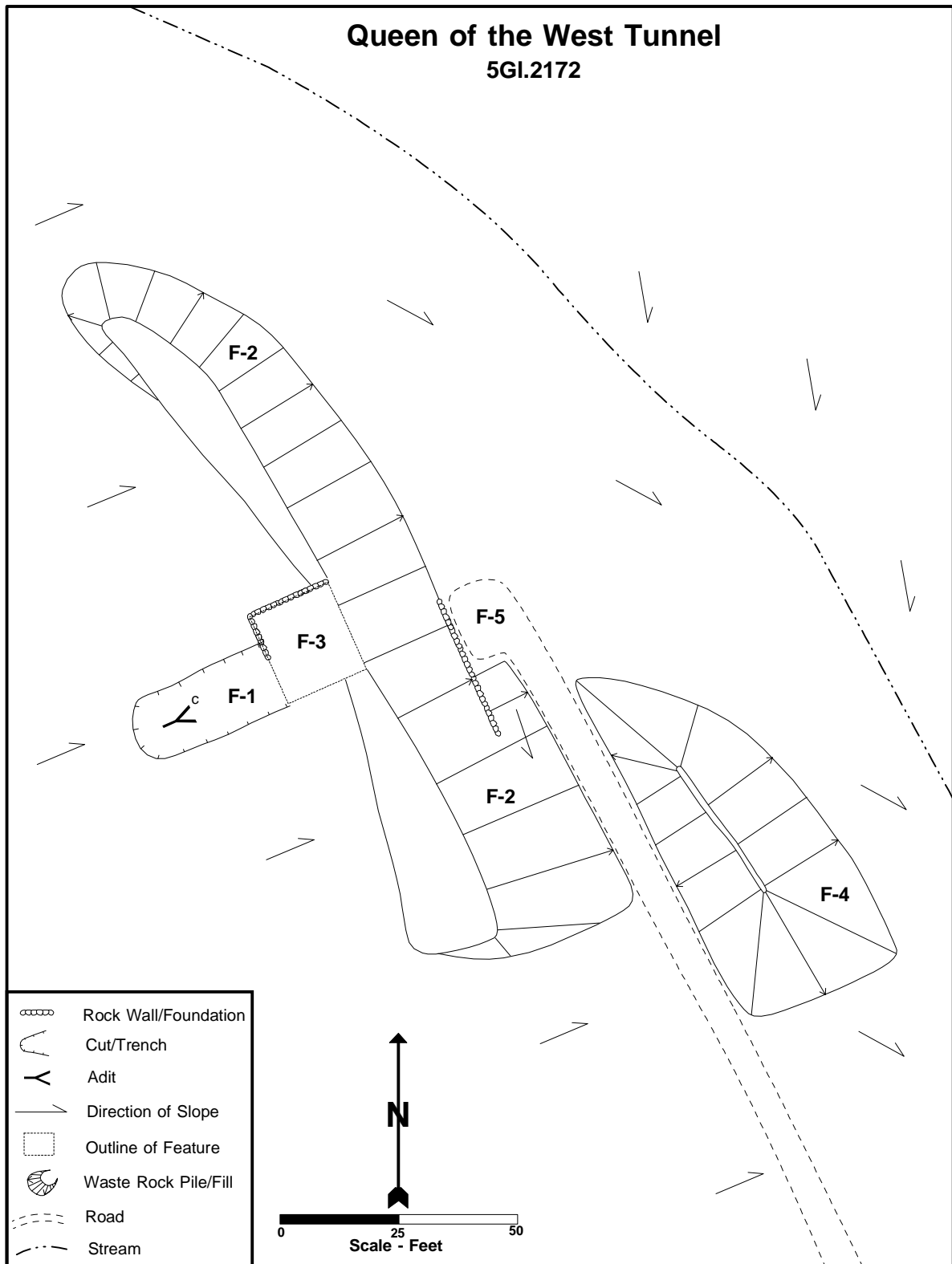


Figure 4.59: Plan view of Queen of the West Tunnel, 5GL.2172.

Running out of room for waste rock flanking the tunnel, the mining outfit extended a trestle southeast over the gulch floor and dumped more waste rock off the end. The deposited an isolated mound of rock (F4) 35' wide, 82' long, and 15' high, its length reflecting the track and trestle at one time present. The dump is well-preserved.

The tunnel's surface plant was very simple. In addition to the ore car tracks, facilities included a tunnel house at the tunnel portal and an ore bin immediately below. The tunnel house was 18'x20' in plan, half frame and half rock masonry, built on a platform (F3) cut from the slope. All structural materials were removed long ago, leaving the platform and 6' high rock walls holding back the cut-bank. The west wall has partially collapsed and allowed earth to gradually fill the platform's interior. A 30 year-old tree grows in the collapse and has blanketed the platform with thick duff.

Nothing remains from the ore bin except for a partially collapsed rock alignment 30' long and indentation 18' wide in the dump's flank. The bin was a stop on a wagon road passing between the waste rock dumps.

The site offers an impoverished artifact assemblage. A few nails, pieces of sheet iron, and window glass fragments are scattered around the tunnel house platform. Bottle fragments and several sanitary food and 5-gallon liquid cans are sprinkled along the dump's base. Buried archaeological deposits of meaning are unlikely because privy pits could not be identified and refuse dumps are absent. A few artifacts and evidence of a forge may be buried underneath fill in the tunnel house platform, but they probably date to the early 1900s. Much is known of small shops dating to this era, and the buried features are therefore probably unimportant.

Queen of the West Tunnel Interpretation

The Queen tunnel saw two principal periods of production. The tunnel served as the mine's principal entry from 1877 through 1885, being driven a considerable distance along the vein. A surface plant was built at the beginning of operations, limited to the tunnel house, ore bin, and ore car track. Although very simple, the plant's general design and facilities were like those at most of the area's other tunnel mines. The tunnel was in use again from 1898 through 1907, and this time, the tunnel was merely a conduit for ore extracted from the vein's depths. The Queen shaft was sunk from a point upslope down to the tunnel and then deeper into the vein. Ore was hoisted up the shaft and transferred into cars for the trip out the tunnel. When owner H.J. Stephens invested in development, he focused on the shaft and made no improvements to the tunnel or its facilities, which changed little from original construction.

Queen of the West Tunnel Condition and Integrity

The Queen of the West Tunnel is a poorly preserved archaeological site. All buildings, structures, and equipment were removed long ago, leaving a handful of archaeological features. One is the tunnel house platform, at one time rock walls holding back its cut-banks. The adjoining tunnel portal collapsed and weakened the platform's west wall, which slumped. The tunnel is no longer clearly identifiable and the platform manifests as a soil-filled depression. The other feature is an indentation where the bin stood, with little evidence denoting the structure itself. Thick stands of pine and fir saplings have overtaken the dump's main surface.

The site retains poor integrity due to deterioration. The surface plant does not convey design because the archaeological features are difficult to distinguish, and without standing

buildings or structures, the site lacks materials, and workmanship cannot be evaluated. The large dumps, located in a good mining landscape, do impart some feeling.

Queen of the West Tunnel Significance

The site is significant as a contributing element of the landscape. The waste rock dumps are visible from Chase Gulch Road and the Gilpin Tramway railroad grade to the northeast, and they add to the sense of mining in the gulch. The site is also obviously one in a series of deep tunnels on the gulch's southwest side.

On its own, the site is recommended ineligible because integrity is insufficient. The existing archaeological features are too poorly preserved to convey the tunnel's importance as a gold producer under Criterion A, or the design and makeup of surface facilities in terms of Criterion C. The site also will not yield important information upon further study.

Queen of the West Tunnel Management Recommendations

Regarding Section 106, the site is significant as an element of the landscape, and its southeastern portion lies on a BLM land tract. Disposal of the tract from federal to local government control adversely affects the site. Mitigation may be required.

The site has good potential as a stop on an interpretive trail. To prepare the site, the following is suggested:

- Detailed archival research, in conjunction with the Queen of the West Shaft upslope. The information is useful for interpretation.
- Remove saplings from the waste rock dump and tunnel house platform.
- Thin surrounding forest, selectively.
- Interpret site with simple sign.

Queen of the West Tunnel Heritage Tourism Potential: High

The Queen tunnel has high potential because it was historically important and the site is accessible from Chase Gulch Road, directly across Quartz Creek.

Interpretive Signage can explain the site's history and relationship to the Queen of the West Shaft above.

Interpretive Loop Trail. The southwest side of Chase Gulch provides a good opportunity for an interpretive loop trail. The route begins on Chase Gulch Road opposite the Centennial Tunnel and crosses the creek. The trail passes through the Centennial Tunnel (5GL.2206), Centre Tunnel (5GL.2207), Queen of the West Tunnel (5GL.2172), Shelby Tunnel (5GL.2199), Chase Gulch Brewery (5GL.2200), and Union Tunnel (5GL.2201). Each site would be interpreted.

Site 5GL.2173 Virginia Mine Road
Project: Land Disposal

The Virginia Mine Road connected original Chase Gulch Road with the Virginia Shaft (5GL.724) on Winnebago Hill's northeast flank. Chase Gulch Road was an artery on the gulch's southwest floor with feeders like the Virginia road to mines on the gulch walls. Built for two-way traffic, Virginia road ascends gently and switches back twice. The origin point on the gulch floor is 8,380' elevation, and the end point at the shaft is 8,480' elevation. Slopes are very steep, northeast-facing, and overgrown with doghair lodgepole and fir forest. Most of the road winds over a BLM land tract.



Figure 4.60: The enlarged topographic map illustrates Virginia Mine Road, 5GL.2173 and neighboring sites. 5GL.724 = Virginia Shaft; 5GL.301 = Queen of the West Shaft; 5GL.2172 = Queen of the West Tunnel; 5GL.2199 = Shelby Tunnel.

Virginia Mine Road History

Archival research found no information specific to the road. It seems likely that the road was built in 1875 when Central City mine operator Hal Sayr bought the Virginia claim and began development. The road was in use as the Virginia produced through the late 1870s, and was also

extended a short distance northwest to the Queen of the West workings around 1880. Both mines were idle by 1885, but reached peak activity from the late 1890s through 1907.

Virginia Mine Road Description

The road can be described in five segments beginning with the Chase Gulch intersection and ascending approximately 800' to the shaft. Manmade features divide the segments.

Segment 1 begins at original Chase Gulch Road on the gulch floor and ascends 140' northwest along the hill slope to the first, lower switchback. The segment was originally graded with cut-and-fill methods, and the tread was 8' wide and the bed 10' wide with loosely aligned boulders and rocks retaining the fill-bank. The road is in poor condition. Erosion has cut channels through the bed and deposited braided sediment on the tread, and thick vegetation chokes the route. In addition, numerous tires have rolled down from the Central City Dump above and collected on the surface.

Segment 2 swings through a broad switchback 100' long bringing the road into a gentle southeast ascent. The road changes character from a cut-and-fill tread 8' wide to a tread 10' wide depressed from wear. Teamsters threw rocks along the north rim as they became exposed, while a berm of soil and cobbles piled up on the inner, southeast side. At the top of the curve, the road encounters the toe of Virginia Shaft dump and crosses a gully. A rock wall originally retained the road, but storm runoff washed it out. Numerous tires are scattered throughout the area.

Segment 3 ascends gently southeast 200' from the washout to a second switchback. The road was professionally graded with cut-and-fill methods, workers cutting one side from the slope and using exhumed rocks as a foundation for the fill-bank. They also loosely aligned large cobbles and boulders to retain the bank's toe. The tread was 7' wide, but wall slump, soil creep, and young trees reduced it to 5' and 6' wide in places. The bed itself is 9' wide.

Segment 4 is a second switchback 50' long, bringing the road from a southeast to a westerly ascent. To accommodate the broad swing of wagon teams, the bed flares from a width of 7' to 36', and then constricts to 7' again. Workers erected a well-built dry-laid rock wall 3' to 6' high to retain the switchback's bulging fill-bank. The tread is overgrown with juniper and fir trees at least 50 years old. A small prospect shaft (IF 5GL.2174) is immediately above.

Segment 5 begins at the second switchback's top end, where it encounters the prospect shaft's small dump. The segment ascends very gently west-northwest for 80', its bed graded mostly with waste rock from the shaft, and then curves west and is again graded with cut-and-fill methods. A rock wall 3' high retains a section 40' long, now thickly overgrown with junipers. The road then continues its easy ascent 180' west to the Virginia Shaft. The segment was well-built, workers cutting the upslope portion from the mountainside and using exhumed rubble as a foundation for the fill-bank. The tread is 7' wide on a bed 8' to 9' wide.

Virginia Mine Road Interpretation

The resource is a good example of dead-end feeder roads graded to specific mines in the Central City district. Building for longevity under constant use by heavy wagons, workers graded the bed with cut-and-fill methods, first creating a firm bed with exhumed rocks retained by dry-laid walls. The workers then paved the rubble with gravel and sand for a flat and well-drained tread. Width was 6' to 8', a standard for large wagons. The road is overgrown but serviceable today because of its quality construction.

Virginia Mine Road Condition and Integrity

Most of the road is well preserved and in good condition. The bed, with its cut-banks and rock walls, is intact, and the tread features its original surfaces. Heavy storm runoff, however, cut a gully through Segment 2 and eroded channels along Segment 1. The road is also becoming overgrown with thick saplings.

Being well-preserved, the road possesses good integrity. Design of the route is readily apparent, and design of the bed, with its cut-and-fill construction, cobble base, and sandy tread is clear. The road also retains integrity of materials and workmanship. Descending through a mining landscape, the road also has association and feeling of mining district transportation.

Virginia Mine Road Significance

The road is both individually eligible and a contributing element of the landscape. The road contributes as a visible ore and freight route connecting the Virginia Shaft with original Chase Gulch Road on the gulch floor. The road's path through the forest and up Winnebago Hill is apparent, with the rock walls adding small-scale detail.

The road is recommended individually eligible under NRHP and SRHP Criterion A for its role in the Virginia and Queen of the West shafts. It was the primary means for freighting ore from and supplies to the shafts. Both mines were among Black Hawk's important gold producers and employers.

The resource is recommended eligible under Criterion C as a good example of a professionally built mine road. Its characteristics include a quality bed with cobble basement, rock retaining walls, sandy tread, and width of 6' to 8'. The gentle pitch also reflects two-way traffic, a common traffic pattern for dead-end mine roads.

In terms of NRHP Criterion D and SRHP Criterion E, the road will yield important information upon further study. In particular, the road was a feeder into a larger transportation network tying Central City to Black Hawk. In the network, roads ascended from Central City up and over Bates and Winnebago hills, tying into Chase Gulch Road on the gulch floor. Chase Gulch Road was, in turn, an artery with feeder roads extending outward along both sides to various destinations including mines and centers of logging. Some routes known as quartz roads were designed for one-way ore traffic, others for in-bound freight, and others for multiple uses. A study of the network based on archival research and documentation of individual roads will shed light on the transportation system fundamental to the Central City district. The findings could be extrapolated to other mining regions.

Virginia Mine Road Management Recommendations

In terms of Section 106, Virginia Mine Road is individually eligible and a contributing element of the landscape. Most of the road crosses a BLM land tract in its winding ascent to the Virginia Shaft. Transfer of the tract from federal to local government is perceived as an adverse effect. Mitigation may be required.

The road also has excellent heritage tourism potential connecting several trails. Suggestions include:

- Detailed archival research may provide the road's name and construction date.
- Remove saplings on road tread. Thin trees along upslope, south side. Stumps to grade.
- Road naturally becomes a ready-made trail.
- Interpretive sign at Virginia Shaft explaining the shaft's and road's history.

Winnebago Hill Haul Road Heritage Tourism Potential: High

The road has high potential because of its strategic location and potential as a connector in the proposed Virginia Mine interpretive trail. The road's lower half provides a feeling of seclusion and discovery, while the upper half has good vantage points.

Connector Trail. The Virginia Mine Road can be readily adapted into a trail by thinning saplings. The road can serve as a connector from Chase Gulch Road, through the Virginia Shaft site, and up to the Gilpin Tramway. The site can be interpreted with signage.

Interpretive Signage. Interpretive signage at Virginia Shaft site can explain the shaft's and road's history.

IF 5GL.2174 Prospect Shaft
Project: Land Disposal

The Prospect Shaft was recorded as an IF because of its simplicity, being limited to a collapsed shaft and its associated dump. However, the shaft is discussed here because it is large and substantial enough to be evaluated in the landscape. The IF is on Winnebago Hill's northeast flank immediately above Virginia Mine Road (5GL.2173), on a BLM land tract. Surrounding slopes are steep, northeast-facing, and overgrown with doghair fir forest.

Prospect Shaft History

No information specific to the shaft could be found.

Prospect Shaft IF Description

The prospect shaft and its waste rock dump occupy a 38'x44' area on Virginia Mine Road's upslope side. Prospectors first dug a pit 14'x18' in area and 5' deep to expose bedrock, and then sank the shaft southwest. Partially open, the shaft manifests as a ragged hole 4' across and 18" high. Slumped earth buries the pit floor. The prospectors dumped waste rock downslope and east by upending an ore bucket. They deposited an uneven, hummocky mound 30'x38' in area and 2½' thick. The dump is eroded and becoming vegetated, which prevents clear photography.



Figure 4.61: View south at the shaft, a hole at lower right with rocky cut-bank above.

Dean Prospect Complex IF Eligibility Recommendations

The Prospect Shaft is significant as a contributing element of the landscape. The waste rock dump and shaft subsidence are prominent features along the Virginia Mine Road, and have a visual presence localized to Winnebago Hill's north flank. The IF contributes detail to the landscape evocative of the mining district's 1870s mineral exploration phase.

Considered on its own, the IF is recommended ineligible. Under Criteria A and B, a firm date could not be established, and archival research uncovered no information. The IF's historical associations are therefore uncertain. In terms of Criterion C, the IF is not a good example of its resource type, a prospect shaft, because it lacks character-defining features and artifacts. The IF will also not yield important information upon further study.

Dean Prospect Complex IF Management Recommendations

The IF is significant as a contributing element of the landscape, and lies entirely on a BLM land tract. Conveyance of that tract from federal to local government is an adverse effect because federal control and protections are forfeited. Mitigation may be required.

In terms of heritage tourism, the IF is a good landscape element but has no interpretive value in itself. Improvements are not warranted.

Site 5GL.2176 Maryland Second Discovery Prospect Complex
Project: Land Disposal

During the 1859 Gregory rush, a prospecting party discovered the Maryland Vein crossing northeast-southwest through Chase Gulch. One party claimed the segment extending up the gulch's north side onto Maryland Mountain as the Maryland. Another party claimed the south segment on Winnebago Hill as the Maryland Second Discovery. A group of prospectors, (possibly the same party) dug a number of probes in search of the vein. The site discussed here was a product of that search, which could have occurred anytime between 1859 and circa 1876.

The site took form as a prospect complex, involving a series of pits, trenches, and a shaft. The series began on Winnebago Hill's summit, 8,730' elevation, and descended 950' northeast along the vein, ending at 8,610' elevation. In 1887, the Gilpin Tramway was graded past the complex's northeast end. A mining outfit then bored a tunnel from the track to undercut the vein. The series traverses a steep, northeast-facing slope choked with Gambel oak and doghair fir and ponderosa pine forest. Most of the site is on an elongated BLM tract.

Maryland Second Discovery Prospect Complex History

Archival research found no information about the site. Given the Maryland Vein's early date and importance, the Second Discovery may have operated under a different name.

Maryland Second Discovery Prospect Complex Description

The site is a series of pits, trenches, and a shaft aligned northeast-southwest on the Maryland Vein. The workings conform to a pattern in which the prospecting party dug pairs of excavations approximately 100' to 130' apart, characteristic of an organized sampling strategy. A cluster of pits and trenches on Winnebago Hill's summit, however, deviates from the pattern and probably marks the vein's discovery point. The cluster features seven pits and trenches (F11-F17) aligned northeast-southwest for 225' along a porphyry dyke. The pits range in size from 6'x8' in area and 4' deep (F12) to 16'x21' in area and 12' deep (F14).

After discovering the vein, the prospect party dug four pairs of probes (F1-F10) to track it in its northeast descent down the hillslope. The smallest pit is 4'x5' in area (F5), and the largest is 13'x17' in area and 4' deep (F7). One of the probes is a trench 8' wide, 20' long, and 6' deep (F9).

The party exposed a promising mineralized lead at the northeast end and sampled it with a shallow shaft (F2). The collar has since collapsed and become a ragged subsidence crater 17' in diameter and 12' deep with bedrock walls. Boulders and rubble plug the bottom. In sinking the shaft, the prospectors upended an ore bucket around the rim to dispose waste rock. They built up a pad (F3) 34'x47' in area and 4' thick, grading the top-surface flat for workspace. The dump's southwestern end was drawn into the shaft when its collar slumped. The prospect outfit also graded a pack trail (F4) 7' wide and 84' long from an adjoining claim.

During the 1890s, miners bored a new tunnel from the Gilpin Tramway railroad grade southwest along the vein to work it upward. Historically, the tunnel (F18) was 4'x6' in the clear and supported with timbering, which rotted and collapsed. The tunnel became a semicircular subsidence zone 27'x42' in area with a rubble headwall 16' high. When developing the underground workings, miners used ore cars to dump waste rock over the side of the railroad

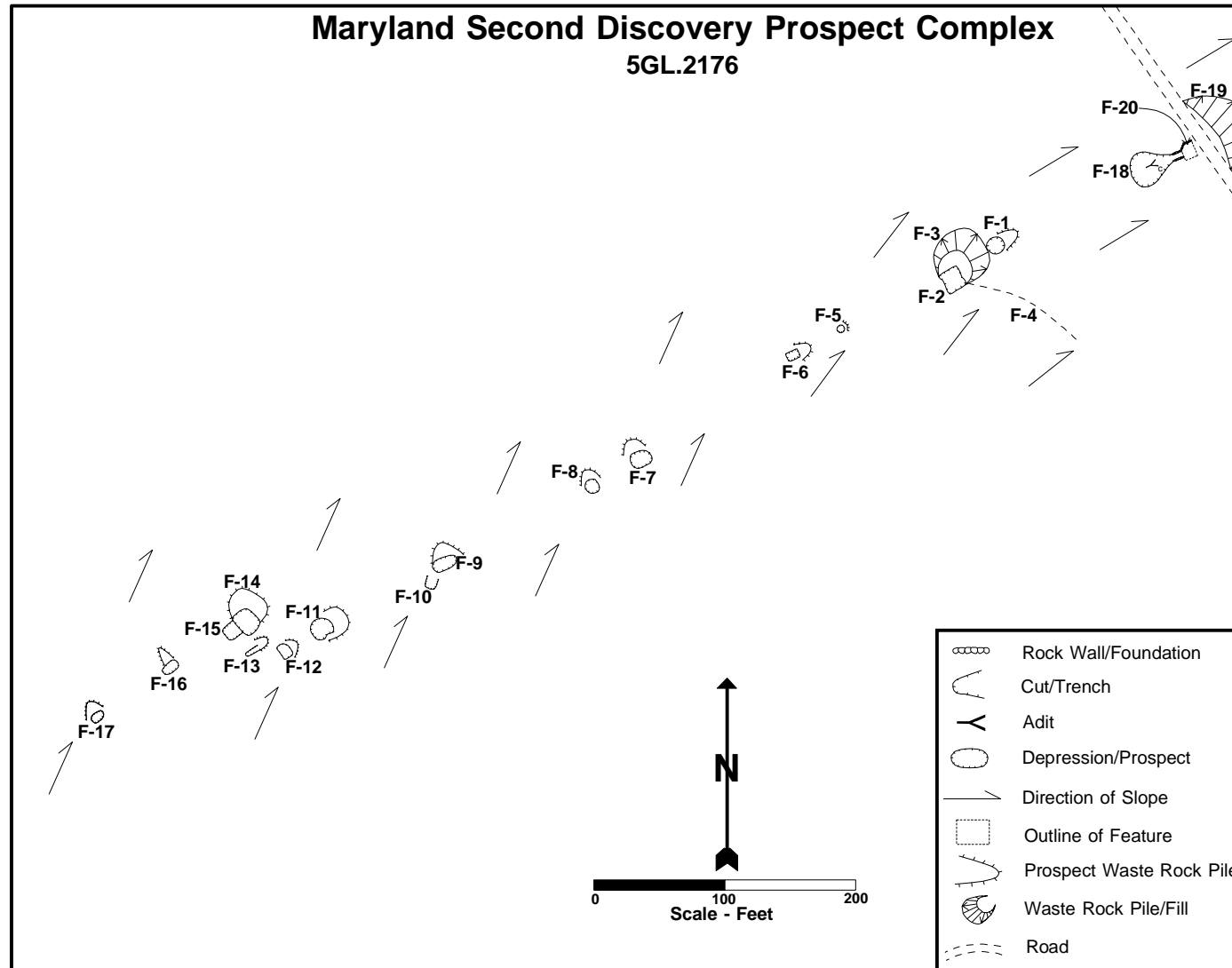


Figure 4.62: Plan view of Maryland Second Discovery, 5GL.2176.

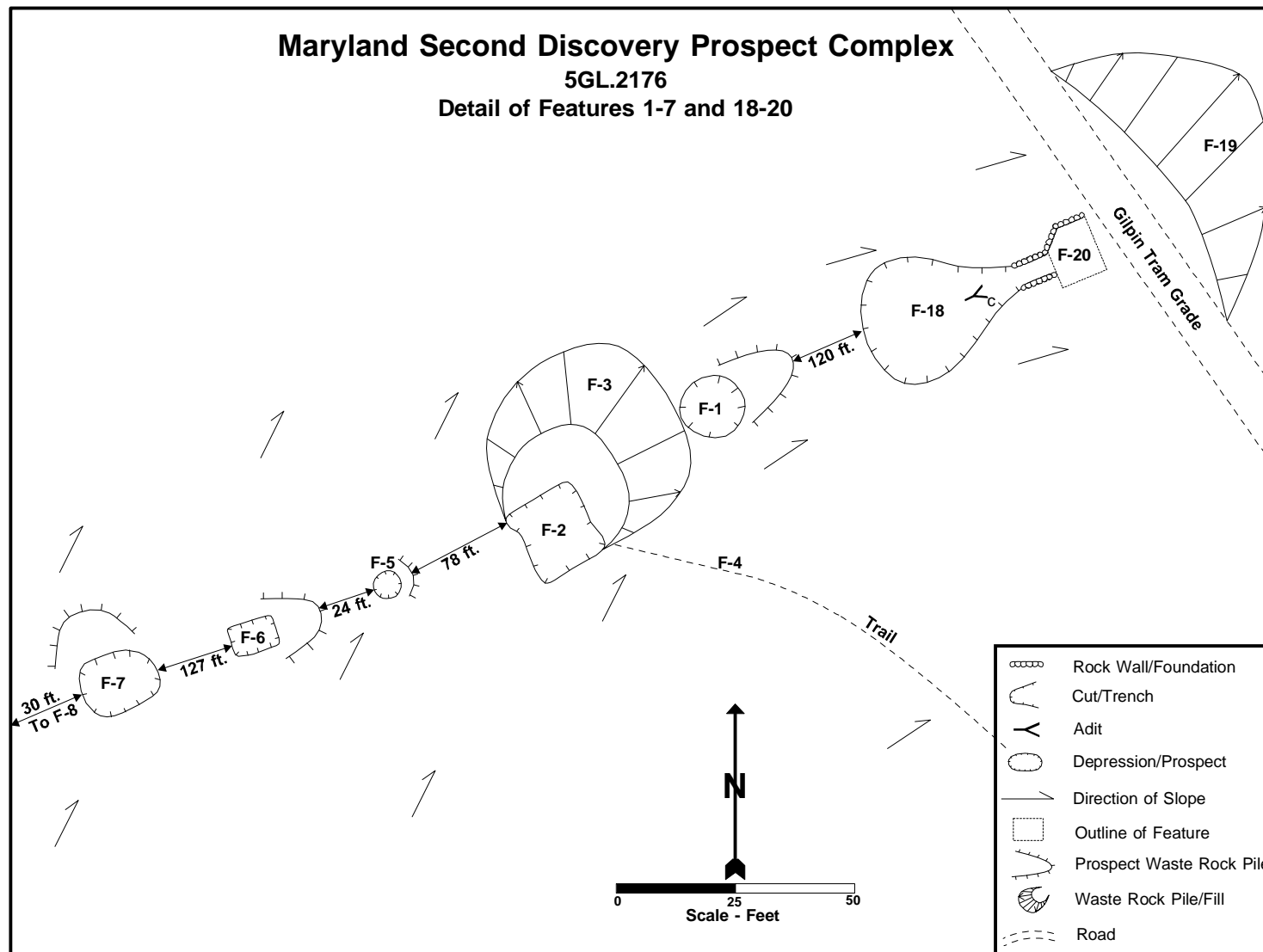


Figure 4.63: Detail of Maryland Second Discovery's northeastern workings.

grade. They created a fan (F19) 45'x54' in area and 4' thick. A tunnel house enclosed the tunnel portal and a simple blacksmith shop. When intact, the building was 12'x18' in area on a cut-and-fill platform with dry-laid rock walls retaining all sides except for the northeastern, which was covered with a plank façade. The Gilpin Tramway passed 3' away from the building's doorway. Presently, a partial platform (F20) remains, the rock walls having collapsed and the cut-banks slumped. The platform is 12'x18' in area and overgrown, with a portion of the building's northwest wall still standing. Slumped earth and duff bury the surface, concealing artifacts.

Maryland Second Discovery Prospect Complex Interpretation

The Maryland Second Discovery is the result of an organized search during the early 1860s by experienced prospectors. They began by finding a bold porphyry dyke trending northeast-southwest across Winnebago Hill's summit and then sampled both sides for a gold vein. Experience had taught them that dykes had plains of weakness along the sides where mineralized veins sometimes formed. The prospectors dug a cluster of pits and determined that a vein in fact paralleled the dyke's southeast face. They tracked the dyke and the vein with pairs of pits approximately 100' to 130' apart until reaching a promising lead 600' northeast. They sank a shaft there but did not find enough ore to justify further work. The pits in pairs, the regular spacing, and lack of extraneous probes indicate that the party knew what it was doing.

During the 1890s, a mining outfit developed the meager ore stringer discovered in the shaft by driving a tunnel over to it from the Gilpin Tramway bed. The operation was simple, short-lived, and marginally productive.

Maryland Second Discovery Prospect Complex Condition and Integrity

The site's prospects are in good condition. All are well-formed and bold, but slightly overgrown. The prospect shaft is in poor condition, having collapsed and drawn in the center of its waste rock dump where small-scale features may have been at one time. The tunnel is marginally preserved. The portal collapsed and tunnel house walls slumped, but the features are identifiable, if not becoming overgrown with fir saplings.

The site retains some aspects of integrity. In a broad sense, all the workings conform to a pattern clearly conveying the sampling strategy that the prospect party purposefully implemented. The strategy is a design of sorts. The site also has feeling and association of discovery and tracking a mineralized vein. The setting is excellent. Without buildings or structures, the site lacks integrity of materials and workmanship.

Maryland Second Discovery Prospect Complex Significance

The Maryland Second Discovery is both recommended individually eligible and is a contributing element of the landscape. In terms of the landscape, the series of pits on Winnebago Hill's summit and northeast flank is visible from vantage points to the north and adds small-scale detail in a localized sense. The tunnel and its dump are also visible from afar and contribute detail along the tramway grade.

The site is recommended individually eligible under NRHP and SRHP Criterion C as a good archaeological example of a prospect complex. Overall, the site clearly conveys an intensive search for a mineralized vein, and its discovery and deeper probing through a shaft.

The pits and shaft conform to pattern clearly reflecting an organized, planned sampling strategy implemented by experienced prospectors.

Maryland Second Discovery Prospect Complex Management Recommendations

The Land Disposal will adversely affect the complex. The resource is a contributing element of the landscape, recommended individually eligible, and lies on a BLM tract. The tract's transferal from federal domain to local government could pose a threat to the resource. Mitigation will be required.

The complex has value for heritage tourism because its tunnel is directly on the Gilpin Tramway. To this end, the following actions are recommended:

- In-depth archival research. Further research may reveal the site's history.
- Install simple name sign.
- Remove saplings around the tunnel and tunnel house platform. Supervision is required.

Maryland Second Discovery Prospect Complex Heritage Tourism Potential: High

Interpret Site: A simple sign can mention the site's name and discovery date.

IF 5GL.2177 Prospect Adit ***Project: Land Disposal***

The Prospect Adit was recorded as an IF because of its simplicity, being limited to a substantial trench and collapsed portal driven into the Gilpin Tramway's upslope cut-bank. The adit is discussed here because its prominent location and substantial size warrant evaluation in context of the landscape. The IF is on Winnebago Hill's northeast flank tucked closely between the Maryland Second Discovery Prospect Complex (5GL.2173) and a small mine (5GL.2178), along the Gilpin Tramway railroad grade. All the resources are on a BLM land tract. Surrounding slopes are steep, northeast-facing, and overgrown with doghair fir forest. A photograph is unavailable.

Prospect Adit History

No information specific to the adit could be found.

Prospect Adit IF Description

Prospectors drove a short adit southwest into the steep, northeast slope of Winnebago Hill. They excavated a trench 15' wide and 34' long to expose bedrock, and then bored the adit into the trench's end. Waste rock was dumped downslope, as was common. The Gilpin Tramway was graded past the adit in 1887, scraping away any waste rock. The trench was left intact but the adit portal itself collapsed over time and became buried by slumped earth. Presently, the

trench is a distinct and substantial cut in the railroad grade's upslope bank. Waste rock is gone.

Prospect Adit IF Eligibility Recommendations

The Prospect Adit is significant as a contributing element of the landscape. The trench is a notable feature along the Gilpin Tramway railroad grade and has a visual presence localized to Winnebago Hill's northeast flank. The IF contributes detail evocative of the mining district's 1870s mineral exploration phase.

As an individual resource, the IF is recommended ineligible. Under Criteria A and B, a firm date could not be established, and archival research found no information. The IF's historical associations are therefore uncertain. In terms of Criterion C, the IF is not a good example of its resource type, a prospect shaft, because it lacks character-defining features and artifacts. The IF will also not yield important information upon further study.

Prospect Adit IF Management Recommendations

The IF is significant as a contributing element of the landscape, and lies entirely on a BLM land tract. Conveyance of that tract from federal to local government is an adverse effect because federal control and protections are forfeited. Mitigation may be required.

In terms of heritage tourism, the IF is a good landscape element but has no interpretive value in itself. Improvements are not warranted.

Site 5GL.2178 Mine, Name Unknown ***Project: Land Disposal***

A prospecting party found a small gold vein on Winnebago Hill's northeast flank and developed it with two short adits. The vein was a short distance southeast of the Maryland Second Discovery, and paralleled its northeastern strike. The adits, stacked one on the other, produced for a brief time probably during the 1870s and then closed. In 1887, the Gilpin Tramway was graded below, and a mining outfit then reopened the upper adit and built an ore bin along the track to load rail cars.

All structures and buildings were dismantled after the second operation closed, leaving a simple assemblage of archaeological features. The site qualifies as an archaeological example of a tunnel mine. Surrounding slopes are extremely steep, northeast-facing, and overgrown with Gambel oak and ponderosa pines. Elevation is 8,600', and the entire site lies on a BLM tract.

Unknown Mine History

The site's name could not be determined, and a name is necessary for archival research. It seems likely, however, that the vein was discovered during the early 1860s, around the same time as the neighboring Maryland Second Discovery (5GL.2176).

Unknown Mine Description

The site features two adits and subtle remnants of simple surface facilities. The adits were driven southwest along the vein and stacked one over the other, separated by 30' elevation. Each was, in essence, a development level allowing miners to work different sections of the vein. The adits have since collapsed, becoming ragged and eroded scars with no original form. The upper (F1) is 17' wide, 28' long, and 8' deep, and the lower (F2) is almost the same size.

The upper adit's waste rock dump (F3) took form as a hummocky mound 45'x48' in area and 3' thick. Miners created it by first shoveling soil and broken rock off the vein in preparation for the adits. The initial deposit became a berm. In working the upper adit, the miners then added more waste rock by emptying wheelbarrows, enlarging the mound to its present size.

The mining outfit maintained tools and fabricated light hardware in a simple blacksmith shop southeast of the adits. The flimsy frame building was dismantled long ago, leaving a faint cut-and-fill platform (F4) 12'x16' in area. A dry-laid rock wall 2' high retains the fill-bank. The platform is now difficult to perceive because most of the wall collapsed, the cut-bank slumped, and vegetation overtook the surface, concealing artifacts.

Sometime after the Gilpin Tramway was graded below the site, another mining outfit reopened the adits. The outfit constructed a flat-bottom bin 8'x15' in area along the tramway bed to store ore. Presently remaining is a platform (F5) similar to a loading dock, consisting of waste rock fill retained by dry-laid rock walls 3' high. Tramway cars pulled up next to the platform, and workers easily transferred the ore into them from the bin.

When the tramway was graded past the site, the lower adit's waste rock dump (F6) was spread out and its top flattened. The dump is now a fan 32'x49' in area and 4' thick.

The site offers only a handful of artifacts. A piece of lumber and several wire nails were incorporated into the ore bin platform's lower wall, and a piece of sheet iron is downslope. Buried archaeological deposits are absent.

Unknown Mine Interpretation

The mine was worked in two brief and marginally successful periods. During the first, sometime during the 1860s or 1870s, several miners drove two adits along the vein to develop a thin stringer of gold ore. The adits were spaced only 30' apart in elevation instead of 50' (the latter being an increment commonly used in professionally planned operations). The workings were shallow and the surface facilities were limited to a small blacksmith shop, as the vein was not rich enough to return enough revenue to warrant more improvements. When the Gilpin Tramway railroad was graded past the site in 1887, several miners determined that the lower shipping rates might render remaining ore profitable to produce. They reopened the adits during the 1890s and cleaned out the vein within a short time. Their operation was as simple as the first.

Unknown Mine Condition and Integrity

The site is in poor condition due to natural deterioration. The adits collapsed and now take form as a linear scar of ragged rock overgrown with fir saplings. The shop platform's cut-and-fill-banks slumped, and its surface became blanketed with erosional sediment and thick juniper ground-cover. Waste rock slid down from the upper dump and covered the ore bin platform's surface.

The site has several aspects of integrity. The dumps and rock wall convey feeling of mining, and the site is in an intact setting. But the feature assemblage is too deteriorated to impart design, association, materials, and workmanship.

Unknown Mine Significance

The site is significant as a contributing element of the landscape. The waste rock dumps are visible from vantage point to the north, while the adit scar and rock wall are prominent details along the tramway bed evocative of mining.

The site is recommended ineligible on an individual basis because integrity is poor. Under Criterion A, the site is not sufficiently intact to convey its historical associations. In terms of Criterion C, the site is no longer a good example of its resource type, a tunnel mine. The adits manifest as scars and remnants of the surface facilities are difficult to interpret. The site will also not yield important information upon further study.

Unknown Mine Management Recommendations

In terms of Section 106, the Land Disposal will have an adverse effect. The site is a contributing element of the landscape and lies on a BLM land tract. Conveyance of the tract from federal to local government reduces restrictions preserving the site as a contributing element. Mitigation will be required.

Unknown Mine Heritage Tourism Potential: Medium

The site has value for heritage tourism as a prominent landscape element located directly on the Gilpin Tramway route. The site's waste rock dumps and rock walls add small-scale detail contributing to the feeling of mining. But without archival information, the site has little interpretive potential. No actions are recommended.

Site 5GL.2179 Road or Elephant Prospect Complex ***Project: Land Disposal***

Prospectors discovered the curiously named Road or Elephant Vein circa 1860, traced it with a series of pits, and then staked a claim by the same name. The site discussed here encompasses a pit group at the claim's southwest end. The pits are in a series approximately 210' long oriented east-northeast, aligned with the vein. The site lies on Winnebago Hill's steep northeast shoulder, 8,640' elevation, amid open meadow with stands of mountain mahogany brush. The Gilpin Tramway railroad grade coincidentally passes by the site's lower end.

Road or Elephant Prospect Complex History

Archival research found little information specific to the Road or Elephant. Central City mining expert Theodore H. Becker had the property surveyed for patent in 1880, but the claim's

shape and size indicate that prospectors staked it around 1860. At that time, claim regulations had not yet been standardized, and hardrock claims were commonly 50' wide and in lengths of 50' or 100' increments. The Road or Elephant was as wide and an impressive 3,000' long, meandering northeasterly with the vein. Becker's survey claim plat indicates that prospectors had traced the vein with a series of excavations, but there was no substantial underground development.⁴⁸

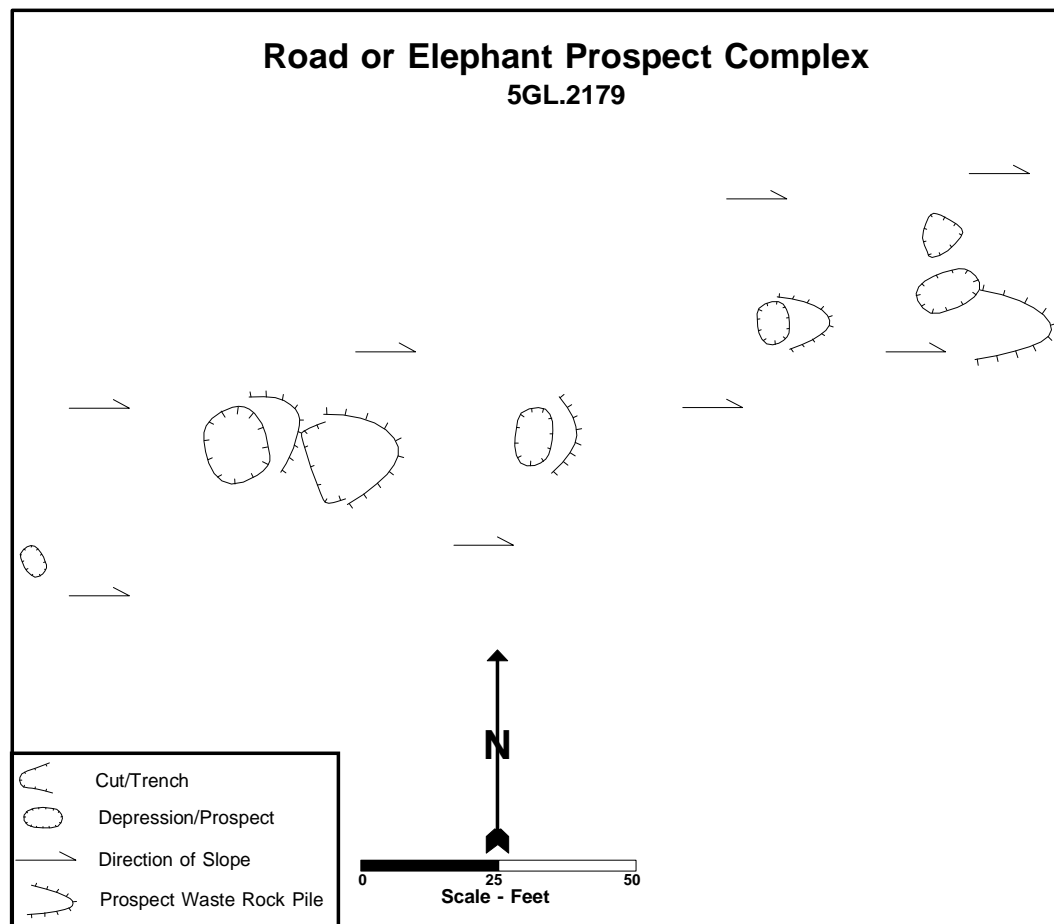


Figure 4.65: Plan view of Road or Elephant Prospect Complex, 5GL.2179.

Road or Elephant Prospect Complex Description

The site is composed of a series of seven pits, mostly filled with erosional sediment. The southwestern three pits are on BLM land while the northeastern three are on the Road or Elephant claim, and the middle is uncertain. The pits vary in size and depth. The smallest, at the site's western end, is 4'x6' in area and only 1' deep. The largest, the next adjacent, is 12'x14' in area and 6' deep. The rest of the pits are ovoid and shallow with thin scatters of waste rock and

⁴⁸ Mineral Claim Survey Plat: Road or Elephant.

sand shoveled downslope. None of the pits exhibit structural improvements or attempts at leveling ground for workspace.

The site lacks artifacts and buried archaeological deposits.

Road or Elephant Prospect Complex Condition and Integrity

The site is in poor condition because of natural deterioration. Storm runoff washed sediment into all the pits, eroded their rims, and carried away most of the waste rock. Only the largest pits are now apparent, the remainder manifesting as shallow divots overgrown with grass and brush. The prospect complex is difficult to perceive even from nearby vantage points.

The site has little integrity. Aligned east-northeast along a vein, the pits reflect an organized sampling strategy, which can be considered a design of sorts. But the complex has little feeling or association because the pits are difficult to discern and lack characteristics clearly evocative of prospecting. The aspects of materials and workmanship do not apply to the site because it never had buildings or structures.

Road or Elephant Prospect Complex Significance

The site is not a contributing element of the landscape because it is difficult to discern and has minimal visual presence. The site also fails to meet NRHP and SRHP Criteria and is therefore recommended ineligible on its own. In terms of Criterion A, the site cannot be dated with certainty because artifacts are absent and archival information is insufficient. Without a date, the complex's historical associations are merely speculative. Under Criterion B, archival investigation was unable to determine who dug the pits. Regarding Criterion C, the site is not an outstanding example of its resource type, a prospect complex. The feature assemblage is limited to seven poorly preserved pits. Other character-defining features associated with prospect complexes such as tent platforms and blacksmith forges are absent, as are artifacts. Simple prospect complexes such as the one discussed here are among Colorado's most common types of mining resources. The site will also not yield further information upon further study.

Road or Elephant Prospect Complex Management Recommendations

The Land Disposal has no effect on the site under Section 106. The site does not contribute to the landscape and is ineligible in itself. No further considerations are warranted.

The site also has little heritage tourism potential because it offers little to interpret and is nearly invisible in the landscape.

Road or Elephant Prospect Complex Heritage Tourism Potential: None

The site has no heritage tourism potential.



Figure 4.66: The enlarged topographic map illustrates Aetna Prospect Trench, 5GL.2180. The yellow line is Gilpin Tramway railroad grade. 5GL.2211 = Aetna Tunnel; 5GL.2212 = Aetna Shaft.

Site 5GL.2180 Aetna Prospect Trench
Project: Land Disposal

Prospectors discovered the Aetna Vein crossing through the southwest and northeast sides of Chase Gulch. The vein began somewhere underneath Winnebago Hill, trended northeast through the gulch, and into Maryland Mountain. They staked the Aetna claim and developed the Winnebago Hill segment via the Aetna Tunnel (5GL.2211), but only after charting the vein with an extensive prospect trench 570' long. The trench presently begins on Winnebago Hill's northeast flank and descends straight down to the south floor of Chase Gulch, ending adjacent to the Aetna Shaft (5GL.2212). The hill slope is thickly overgrown with doghair fir and brush, concealing the trench from view. The Gilpin Tramway railroad grade coincidentally passes the trench's head, 8,590' elevation. All but the trench's northeast end lies on a BLM tract.

Aetna Prospect Trench Description

The trench is a relatively simple resource recorded as a site because of its significant size. Prospectors began midway on the hill, working their way downward and to the northeast to clear overburden off the Aetna Vein and hopefully expose ore. The trench's southwest origin point is 6' wide and 3' deep, now heavily overgrown. The prospectors shoveled waste rock along both sides, where it accumulated as low berms which have now mostly been washed away. During the 1890s and 1900s, Central City residents dumped domestic refuse off the Gilpin Tramway bed above (5GL.2104.1), where it accumulated in the trench's head.

As the trench descends northeast, it gradually increases in width and depth, expanding to 7' wide and 3' deep approximately 160' down, and 9' wide and 4' deep around 270' down. This is probably mainly the result of erosion. As the trench walls retreated into the slope, waste rock slid in and was washed away. Around 100' from the northeast end, the trench is 13' wide and 7' deep, its floor becoming stepped with waste rock mounds. More waste rock was piled along the southeast side. The trench becomes even larger afterward, being 15' wide and 7' deep and then ending adjacent to the Aetna Shaft (5GL.2212). A bench of waste rock approximately 16' wide and 15' long is at the mouth. Overall, the trench is thickly overgrown, making photography impractical.

Central City residents dumped a diverse artifact assemblage of domestic refuse over the tramway grade and down into the trench head. The assemblage includes hand-finished and early machine-made bottles, mostly liquor and beer, with some wine and medicine vessels, all broken. Contemporary cans are scattered around, such as hole-in-cap, vent-hole, early sanitary, and key-wind coffee types. General domestic items are limited to boots, a vinegar cruet, and baking pan. Combined, the cans and bottles are 1905-1915 in age. Buried archaeological deposits are absent because slopes are too steep.

Aetna Prospect Trench Condition and Integrity

Overall, the resource is poorly preserved. Thick brush and doghair evergreen forest has overtaken all surfaces, concealing the trench, despite its size. The trench itself is heavily eroded and appears as little more than a deep, wide erosional gully with no original form.

The resource possesses little integrity because of overgrowth and deterioration. Design and association are no longer apparent, and materials and workmanship are not relevant because the trench lacks buildings or structures. The trench has no feeling, but the setting is intact.

Aetna Prospect Trench Significance

The trench is not a contributing element of the landscape because it is completely choked with vegetation and invisible from vantage points.

The trench is also recommended ineligible on its own. Under Criterion A, the trench was an early prospect but no longer embodies its resource type because of heavy deterioration. In terms of Criterion C, the trench is not an outstanding example of its resource type, a prospect trench, due to insufficient integrity. The trench also lacks character-defining features necessary for eligibility, such as a distinct blacksmith field forge, are absent. The site will also not yield important information upon further study.

Aetna Prospect Trench Management Recommendations

The trench is a non-contributing element of the landscape and NHL, and is recommended ineligible in itself. Given this, the Land Disposal will have no effect in terms of Section 106.

Site 5GL.2181 Prospect Complex ***Project: Land Disposal***

The site is a simple prospect complex created in search of a vein on Bates Hill's north shoulder. The complex begins in open meadow on the hill's summit, 8,550' elevation, and trends northeast over the hill's shoulder and ends amid thick Gambel oak and mountain mahogany. The nearest resources are the Gilpin Tramway grade and a prospect shaft approximately 300' southwest. DRMS bulldozed the site's shaft closed during the late 1980s or 1990s but did not record the site. The entire complex is on a BLM tract, and also within a north corner of the Central City – Black Hawk National Historic Landmark District (NHL).

Prospect Complex History

The name of the vein or prospect complex could not be determined. A name is necessary for archival research. It seems likely that the complex was developed during the 1870s or early 1880s, one of the mining district's principal periods of mineral exploration.

Prospect Complex Description

The site encompasses a linear group of three pits, a trench, and a shallow shaft. A prospecting party probably observed pieces of mineralized rock amid the grass tufts on the hill's crest and realized that they were associated with a vein passing underneath. The party began by digging a random pit (F6) near the discovery point to expose bedrock and, the members hoped, a good vein. Scraping off soil, the prospectors blasted a small pit 6'x8' in area and 3' deep in solid rock, finding nothing. They moved north and encountered better indications, digging a series of three pits and one trench (F1-F4) on a vein of some sort. The pits were similar in size, being nearly 12' in diameter and around 3' deep. The trench was 6' wide, 13' long, and 2½' deep, exposing a promising lead.

Hopeful that their work would pay off, the party sank a shaft (F5) to sample the vein at depth. Unfortunately, little more can be observed because DRMS backfilled it by bulldozing in its dump during the late 1980s or early 1990s. A pipe monument marks the shaft, and the waste rock dump is a scraped pad 36'x42' in area and 5' thick.

The site presently lacks artifacts, although DRMS could have pushed the site's assemblage into the shaft. Buried archaeological deposits are absent because activity was brief and limited to prospecting, which tended not to generate materials in volume. Privy pits could not be found.

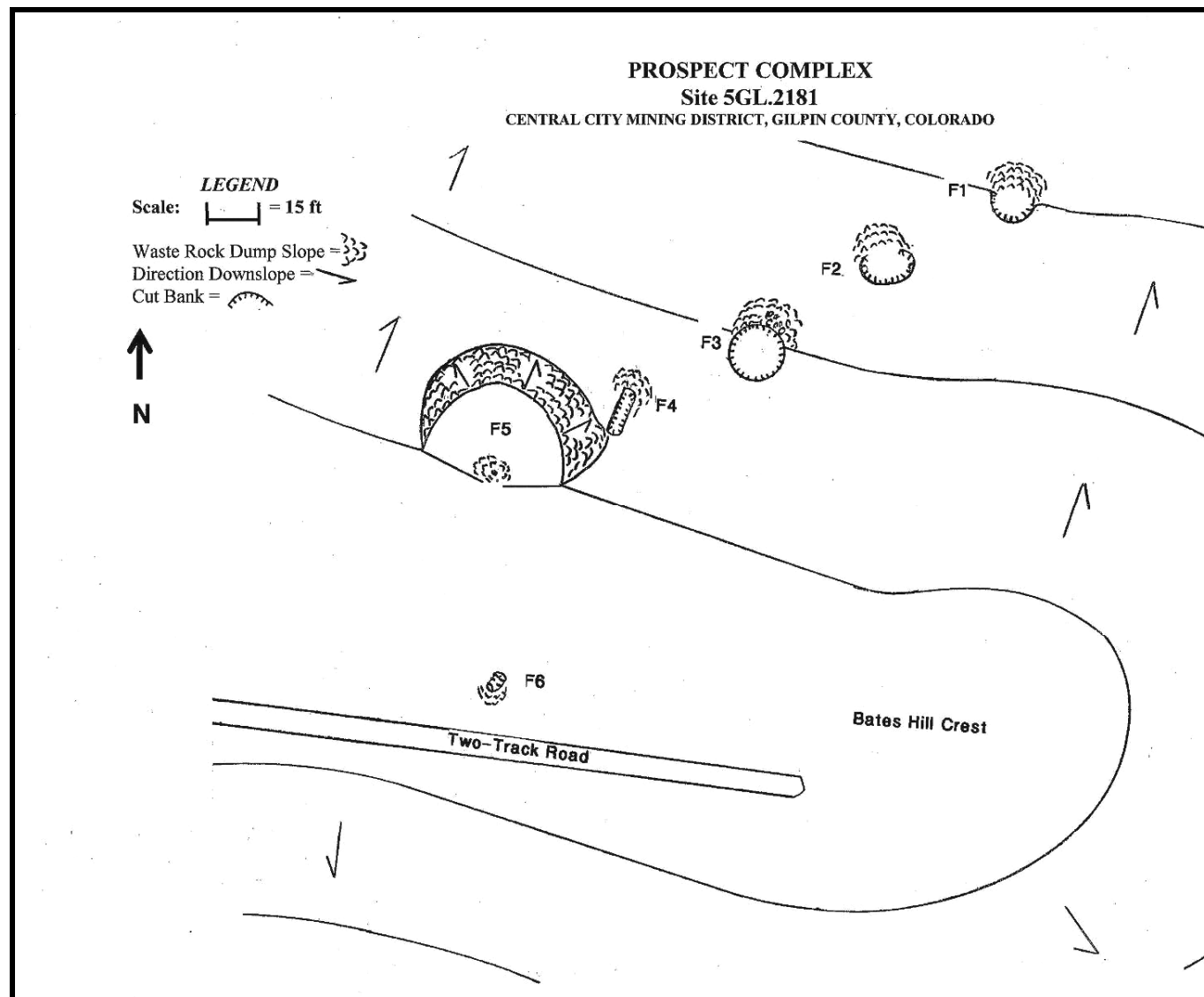


Figure 4.67: Plan view of Prospect Complex, 5GL.2181.

Prospect Complex Interpretation

The site is an expression of a brief effort to find a mineralized vein and sample it once uncovered. Uncertain exactly where the vein was hidden, the prospecting party began by blasting a random pit into bedrock. They moved a short distance north, unearthed the mineral formation, and sank an exploratory shaft approximately 60' deep. Surface facilities were simple, limited to a traditional hand windlass as a hoist. The site had no blacksmith shop, which were usually stationed at substantial prospects. The shaft, trench, and three pits conform to a pattern characteristic of an organized sampling strategy. They are in a precise northeast-southwest line, a uniform 25' apart, and the pits similar in size.

Prospect Complex Condition and Integrity

The site is in poor condition. The small pit and trench are overgrown, partially filled with erosional sediment, and somewhat subtle. The large pits are fairly well preserved but hidden by thick brush and ponderosa pines. The shaft and its dump have been destroyed by mine closure during the late 1980s or early 1990s. DRMS bulldozed the dump into the shaft, destroying any small-scale features and artifacts that may have been present at one time. A pipe monument marks the shaft, and a scraped, overgrown pad the dump.

The site has poor integrity primarily due to mine closure. Overall, the prospects conform to a pattern characteristic of an organized sampling strategy. The pattern can be considered a type of design. With the shaft destroyed and artifacts absent, however, the site has no integrity of materials, workmanship, or association. The site also has little feeling because most prospects are subtle, the shaft was destroyed, and the site overgrown and nearly invisible. The setting is good.

Prospect Complex Significance

The site is not a contributing element of the landscape because it is isolated, its features are subtle, and cannot be detected from vantage points.

The site is also recommended ineligible on its own. Under Criteria A and B, the site's historical associations are unknown because a date cannot be established, and archival research found no information. In terms of Criterion C, the site is not an outstanding example of its resource type, a prospect complex. An artifact assemblage and character-defining features necessary for eligibility, such as a distinct blacksmith field forge, are absent. The site will also not yield important information upon further study.

For the two reasons above, the site is a non-contributing element of the NHL.

Ninety-Four Prospect Complex Management Recommendations

The site is a non-contributing element of the landscape and NHL, and is recommended ineligible in itself. Given this, the Land Disposal will have no effect in terms of Section 106.

Ninety-Four Prospect Complex Heritage Tourism Potential: None

The site has no potential.

Site 5GL.2182 Freedom Tunnel
Project: Basic Inventory

During the 1860s or 1870s, prospectors discovered the Road or Elephant Vein crossing through the southwest and northeast sides of Chase Gulch. The vein began somewhere underneath Winnebago Hill, trended northeast through the gulch, and into Maryland Mountain. They staked the Road or Elephant claim and developed the Winnebago Hill segment via the Freedom Tunnel (5GL.2182) and the Maryland Mountain side through the Road or Elephant Shaft (5GL.733). By the late 1870s, the Freedom Tunnel was lengthened to work the Freedom claim. The site is on Chase Gulch's south side, at the north base of Bates Hill.

The Freedom Tunnel is an archaeological example of a tunnel mine resource type. All buildings, structures, and equipment were removed long ago, leaving an assemblage of archaeological features. Almost completely concealed by thick evergreen and aspen forest, the site presently does not contribute visually to the landscape.

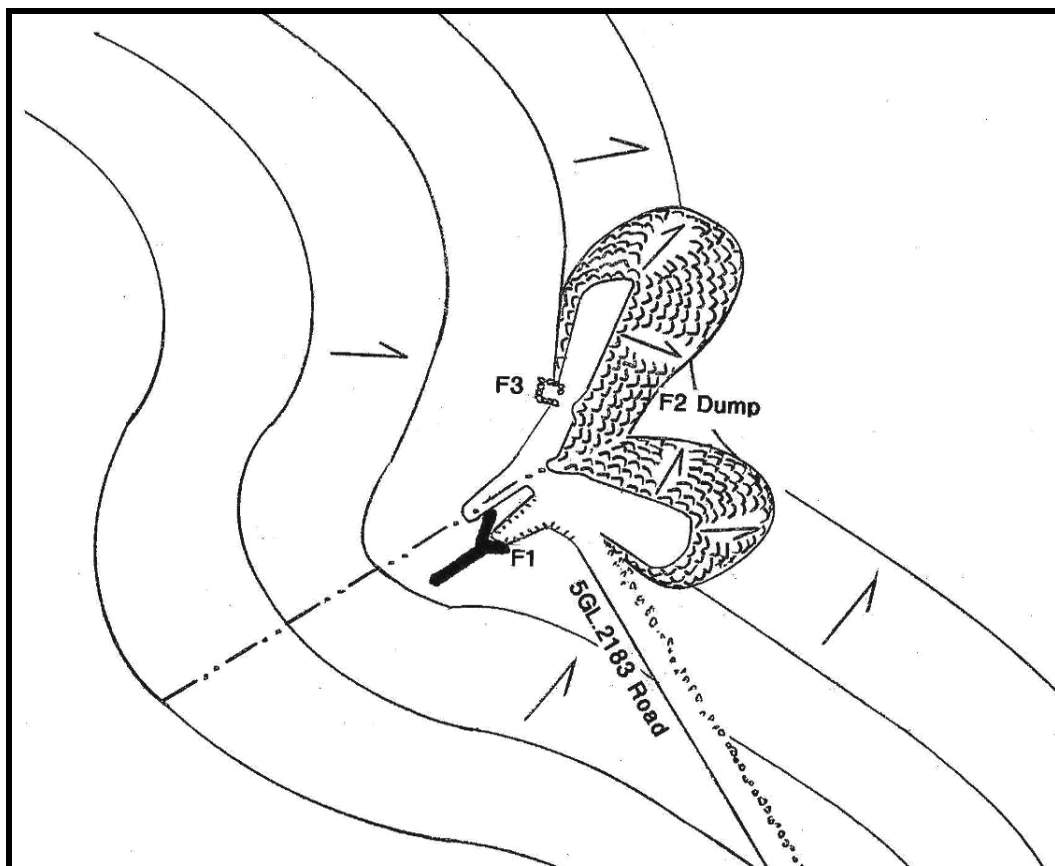


Figure 4.68: Plan view of Freedom Tunnel, 5GL.2182.

Freedom Tunnel Description

Miners sited the tunnel (F1) on the southwest floor of the gulch, next to a seasonal gully, and blasted a niche into bedrock for the portal. They continued underground southwest along the Road or Elephant Vein, an extensive formation trending northeast-southwest through Winnebago

Hill. The portal has since collapsed and is now an overgrown 30' trench backfilled with mud and seeping water.

Using ore cars, miners dumped waste rock along both sides of the gully, forming a tidy L-shaped bench with two lobes. The eastern is 57'x90' in area and the western is 65'x115' in area. Both are approximately 12' thick with the top-surface graded flat. Thick saplings and duff conceal the eastern lobe's surface while the western surface is exposed.

The mine had simple surface facilities limited to a shop and ore bin. Nothing remains of the bin, but the shop (F3) is well-represented by rock walls countersunk into the slope. When intact, the building was 13'x16' in plan with a shed roofline. The walls are neatly stacked tabular rock blocks 18" thick and 6' high retaining rubble and soil. Debris from wall-slump and erosion now fills the interior, at one time used as a recreational shelter.

The site possesses a sparse artifact assemblage of structural materials and industrial refuse, mostly distributed around the shop ruin. Cut nails, the only dateable artifacts, reflect an age range spanning the 1870s and 1880s. Buried archaeological deposits are unlikely as artifacts were not generated in volume, and merely thrown out onto the ground. Further, the deposition environment is not conducive to the accumulation of buried deposits.

Freedom Tunnel Condition and Integrity

Overall, the resource is marginally preserved. Dense aspen and evergreen forest has overtaken all surfaces except the steep flanks of the dump, rendering the individual features difficult to perceive. The tunnel is silted in and overgrown with thick grass, and the shop has partially collapsed and its interior has filled with rubble, duff, and debris to a depth of 3'. In all, the vegetation and duff conceal nearly all artifacts.

The resource possesses limited integrity. With remnants of the surface facilities difficult to perceive, the site has little integrity of overall design. The shop ruin does, however, convey a sense of materials and workmanship used in the stone masonry buildings of area mines. The site possesses some feeling and association of mining during the 1870s and 1880s, and lies in an intact setting.

Freedom Tunnel Significance

In its present condition, the site has marginal importance. Overgrown and concealed by thick forest, the site does not contribute to the landscape and is not eligible in itself for the NRHP or SRHP. The site could contribute if vegetation is thinned, tunnel drainage improved, and the shop ruin cleaned out. The ruin should be cleaned out.

Freedom Tunnel Management Recommendations

- Close hazardous tunnel in cooperation with DRMS. Funding may be available.

Freedom Tunnel Heritage Tourism Potential: Low

Potential is low because the site is thickly overgrown, poorly preserved, and lacks an interpretable feature assemblage.

Linear Resource 5GL.2183
Project: Land Disposal

Freedom Tunnel Road

In 1862, a road was graded from Casey Street, on Bates Hill, northwest into Chase Gulch. The road was a two-directional freight route connecting with original Chase Gulch Road on the gulch's south floor. During the late 1870s, the intersection was blocked by the Freedom Tunnel (5GL.2182) and its substantial waste rock dump, and the road was repurposed to serve the tunnel. The road is presently well-preserved, 875' long, and crosses two narrow BLM tracts. The southeastern half is also within the NHL. The southeastern head at Casey Street is 8,390' elevation and the northwest end at the tunnel is 8,280' elevation. In between these two points, the road traverses Bates Hill's extremely steep northeast flank, overgrown with a dark fir forest.

Freedom Tunnel Road History

Archival research found one notation alluding to the road. A teamster named Mr. Casey graded a road from Central City into Chase Gulch during 1862, probably for hauling ore to the Black Hawk mills. The road's location was not given, but the resource discussed here at one time connected with Casey Street, suggesting a link.⁴⁹



Figure 4.69: The enlarged topographic map illustrates the Freedom Road's route. The Freedom Tunnel is 5GL.2182.

⁴⁹ Ferrell, 1970:11.

Freedom Tunnel Road Description

The road begins at the Freedom Tunnel and ascends southeast 875' to an intersection with Casey Street on Bates Hill in northeastern Central City. Although the road was steep in a few sections, traffic moved in both directions. The road is best described in five segments divided by prospects and natural features.

Segment 1 begins on the east edge of the Freedom Tunnel's waste rock dump. Workers graded the bed with cut-and-fill methods, slicing the upslope, southwest side from the hill and using overburden as fill for the downslope half. Cobbles and small boulders exhumed during excavation were carefully used as a base for the bed, with earth and sand poured over the rubble for the road tread, historically 7' wide. Storm runoff has since deposited more earth over the tread, allowing vegetation to take hold. About 70' southeast of the mine, the road reaches a rocky section, transitioning into *Segment 2*.

Segment 2 crosses over a bedrock outcrop. Workers had broken out an uneven and rough tread 7' wide, but wagon traffic eroded away all soil and loose rocks, leaving a sloped surface of blocky bedrock that was too ragged to cross. Thus, wagons skirted around the outcrop's downslope edge, creating a less severe passage 7' wide. The traffic widened the crossing to 16' total. The troublesome section was 70' long.

In *Segment 3*, the road resumes its original cut-and-fill form and ascends for 375'. As before, workers used rubble to create a lasting bed, retaining it in sections with dry-laid rock walls around 30' long and 2' high. The bed is 10' wide and the tread originally 8' wide, but erosion along the downslope edge and soil creep from above reduced it to 6' to 7' wide. The segment ends at a substantial prospect cut blasted from the upslope side. The cut is irregular and 24' long, 9' wide at the mouth, and 6' wide at the headwall, 11' high. The cut floor is now filled with rubble and overgrown.

Segment 4 ascends 132' southeast to a prospect trench also excavated into the road's cut-bank. The road was graded with the same methods, a dry-laid rock wall 42' long and 2' high retaining a section. The tread is 6' to 7' wide and overgrown. The trench is 8' wide and 27' long.

Segment 5 ascends southeast from the prospect trench to Casey Street. Improvements to Casey Street, and a patio constructed for an occupied house (250 Casey Street), erased the actual intersection. The road extends 145' from the trench and ends at the patio. The bed was graded with the same methods as above but lacks walls, and the tread is now 6' wide and heavily overgrown. A sparse scatter of fine fragments of bottle glass and tableware extends downslope from the house; some pieces are visible along the road's upslope side. The artifacts were not recorded with the road.

Freedom Tunnel Road Interpretation

The road was graded in 1862 as a connector between mines in Gregory Gulch and original Chase Gulch Road, leading to Black Hawk. A short tunnel had been driven southwest into Bates Hill immediately above the intersection. During the late 1870s, tunnel was lengthened to reach the Freedom claim far southwest and renamed the Freedom. Its growing waste rock dump blocked the intersection, and the road was adapted to serve the tunnel.

The road is a good example of the mining district's professionally constructed freight routes. Planning for longevity under constant use by heavy wagons, workers graded the bed with cut-and-fill methods, first creating a firm bed of exhumed rocks retained by dry-laid walls. The

workers then paved the rubble with gravel and sand for a flat and well-drained tread. Width was 6' to 7', a standard for large wagons. The road is overgrown but is serviceable today because of the quality of its construction.

Freedom Tunnel Road Condition and Integrity

The Freedom Tunnel Road is in good condition almost from end to end. The bed and its cut-banks and rock walls are well-preserved, and the tread features its original surfaces. Saplings are, however, beginning to take hold in areas. Road improvements and residential improvements erased the road's final connections with Casey Street on Bates Hill, Central City.

The road possesses sound integrity because of its preservation. Design of the route is readily apparent, and design of the bed, with its cut-and-fill construction, cobble base, and sandy tread is clear. The road also retains integrity of materials and workmanship. Descending through a mining landscape, the road also has association and feeling of mining district transportation.

Freedom Tunnel Road Significance

The road is both eligible in its own right and also a contributing element of the landscape. The road contributes as a visible freight route connecting Central City's Casey Street neighborhood with original Chase Gulch Road on the gulch floor. The road's path through the forest and up the Bates Hill's northeast flank is apparent, with the rock walls adding small-scale detail.

The road is recommended individually eligible under NRHP and SRHP Criterion A for its role in the mining industry. The road was an important means for freighting ore from Central City mines to the Black Hawk mills. Wagons continuously fed the mills via the road from the early 1860s through late 1870s, when the road was repurposed to serve the Freedom Tunnel. The road then became a freight and workers' commute route to the tunnel.

The resource is recommended eligible under Criterion C as a good example of its resource type, a professionally built freight road. The resource embodies characteristics such as a quality bed with cobble basement, rock retaining walls, sandy tread, and width of 6' to 7'. The moderate pitch also reflects two-way traffic.

In terms of NRHP Criterion D and SRHP Criterion E, the road will yield important information upon further study. In particular, the road is an important component of a larger transportation network tying Central City to Black Hawk. In the network, roads from Central City crossed Winnebago and Bates hills and connected with original Chase Gulch Road on the gulch floor. Chase Gulch Road was an artery with feeder roads extending outward along both sides to various destinations including mines and centers of logging. Some routes known as quartz roads were designed for one-way ore traffic, others for in-bound freight, and yet more for multiple uses. A study of the network based on archival research and documentation of individual roads will shed light on the transportation system fundamental to the Central City district. The findings could be extrapolated to other mining regions.

For the above reasons, the road is also a contributing element of the NHL.

Freedom Tunnel Road Management Recommendations

In terms of Section 106, Freedom Tunnel Road is eligible on its own and a contributing element of the landscape. A short section near the middle crosses a BLM land tract. Transfer of the tract from federal to local government constitutes an adverse effect because the road loses federal protection. Mitigation may be required.

The road also provides heritage tourism opportunities as a ready-made trail connecting Casey Street with Chase Gulch. Suggestions include:

- Remove saplings on road tread. Thin trees along upslope, south side. Stumps to grade.
- Road naturally becomes a ready-made trail.
- Interpretive sign at Freedom Tunnel explaining road history.

Freedom Tunnel Road Heritage Tourism Potential: Medium

The road has potential because of its strategic location as a connector from Casey Street to Chase Gulch. The road's lower half provides a feeling of seclusion and discovery, while the upper half has excellent vantage points.

Site 5GL.2185 Mine, Name Unknown ***Project: Land Disposal***

The Aetna Vein was discovered in 1866 and traced from Winnebago Hill, northeast through Chase Gulch, and over onto Maryland Mountain. Hale & Company staked the Chase Gulch segment as the Aetna, while another party took the Maryland Mountain extension under a different name. The site discussed here involves a small and simple mine on the unknown claim.

Encompassing several shafts and their dumps, the site qualifies as an archaeological example of a shaft mine, the resource type. The site is in a minor drainage on Maryland Mountain's south flank, 8,360' elevation. The drainage descends southwest and features a second-growth ponderosa pine forest with understory of Gambel oak. DRMS closed one of the shafts with backfill and a grate cap during the late 1980s but apparently did not record the site. The waste rock dump's south tip spills onto a BLM tract. The Gilpin Tramway railroad grade was graded through the site's lower portion in 1887, probably long after the site was abandoned.

Unknown Mine History

The name of the mine or claim could not be determined, and a name is necessary for research. The vein was, however, a northeastern extension of the Aetna, staked and initially developed in 1866. The site discussed here was almost certainly contemporaneous.

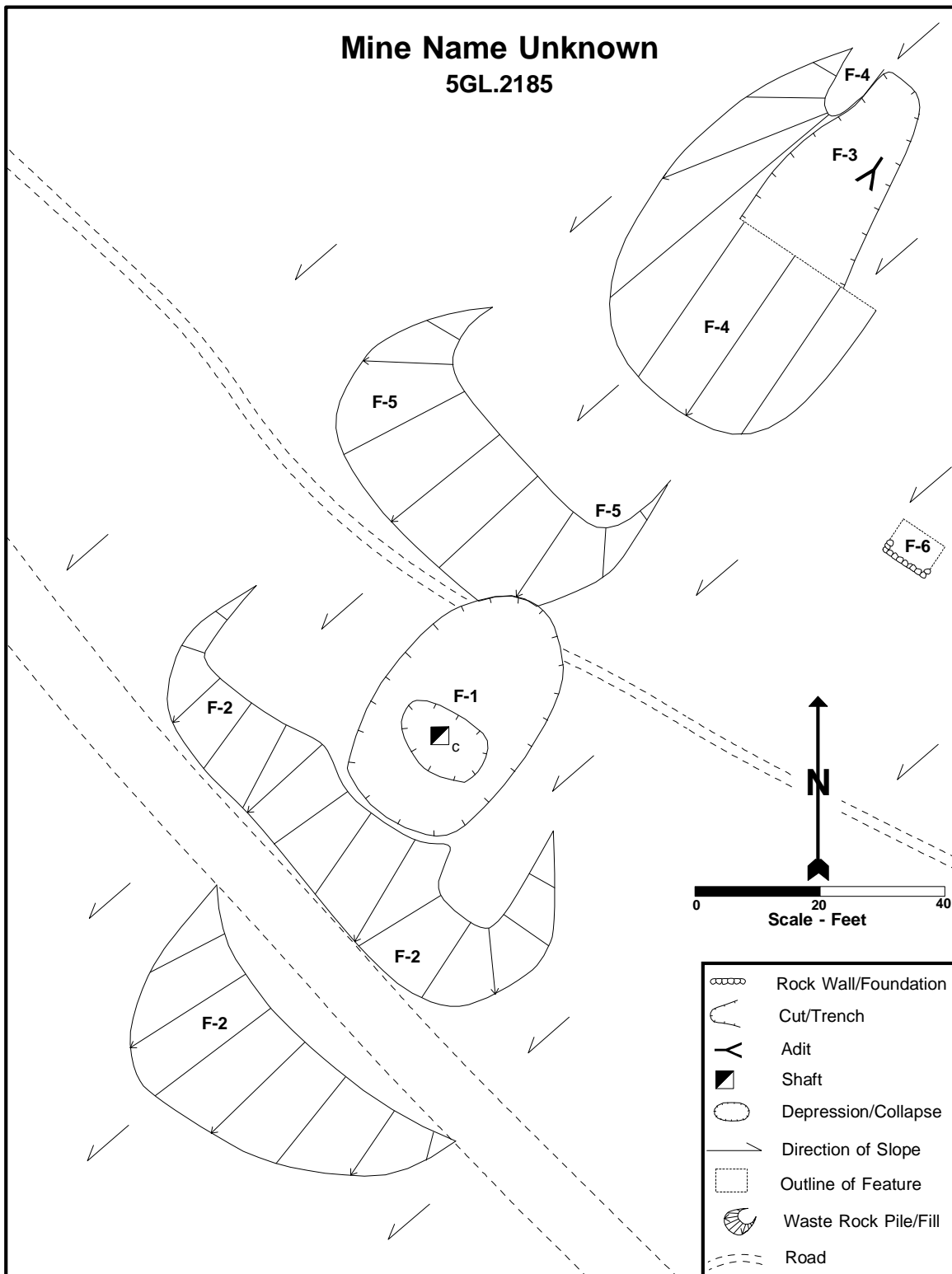


Figure 4.70: Plan view of Mine, Name Unknown, 5GL.2185.

Unknown Mine Description

The site is limited to upper and lower shafts, their dumps, and a small platform. A mining outfit sank the lower shaft (F1) directly on the vein, timbering the collar for support as was common practice. The timbering rotted over time and the collar imploded, becoming a subsidence pit 26'x42' in area and 8' deep with no original form. In sinking the shaft, miners dumped waste rock downslope and southwest, forming a fan (F2) 30' wide, 70' across, and 5' thick. They graded the top-surface flat, which was originally 15' wide and 67' long. When the shaft collapsed, it drew in the entire southeastern portion, destroying any small-scale features that might have been there.

Miners traced the vein northeasterly and upslope for a distance of around 110' and sank a second shaft (F3), encountering a good stringer of gold ore. From ground-surface, they blasted their way downward and extracted the ore as they went, removing the vein material itself but leaving the barren walls largely intact. In so doing, they hollowed out a linear incision with an enlarged center for hoisting ore to the surface. The shaft collar has since collapsed and become a funnel 20'x33' in area and 12' deep, continuing northeast underground. During the late 1980s, DRMS bulldozed waste rock into the shaft and installed a grate over the opening.

In working the upper shaft, miners dumped waste rock downslope by upending an ore bucket. At first, they deposited a shallow fan of material (F4) 40'x64' in area. Later, the miners used more waste rock to build up a pronounced bench (F5) farther downslope, probably for the purpose of sorting and sacking ore. The bench became 37'x52' in area and 4' thick, with a well-graded top-surface 14'x40' in area. Small lumps of low-grade ore support the sorting and sacking supposition.

A small building, possibly a blacksmith shop, stood on a cut-and-fill platform (F6) graded on the mountainside southeast of the waste rock dumps. The platform is 6'x8' in area and features a dry-laid rock wall retaining the fill-bank. Sheetwash sediment on the surface and duff around the sides may conceal artifacts, if any exist.

The site offers an impoverished artifact assemblage, which is to be expected of small 1860s mines. Most artifacts, limited to several cut nails and a very crude, applied wine bottle are scattered on the lower shaft's dump (F2). A disintegrated miner's candlestick, which never had a hat-hook forged into it, lies on the ore sorting platform (F5).

Buried archaeological deposits are absent. Privy pits could not be identified, and mining activity was brief and tended not generate materials in volume. The steep slopes with little top-soil and provide a poor deposition environment.

Unknown Mine Interpretation

The mine was typical for a short-lived 1860s operation. The workings were shallow, the shafts being less than 125' deep, and thus did not require mechanical hoists. Instead, the mining outfit relied on hand windlasses in frames directly over the shafts, and windlasses in general had depth capacities of 125'. Foundations for mechanical hoists are absent. The surface facilities were remarkably simple and limited to the windlasses, a blacksmith shop, the open-air sorting station, and almost certainly log shaft houses over the shaft collars. The shop was probably located on the site's existing platform (F6). Time and sheetwash sand have erased or concealed the scant evidence. The shaft houses were impermanent and removed long ago, and any footprint of the one at the lower shaft would have been destroyed when the collar imploded.

The light artifact assemblage combined with minimal surface improvements confirms that the operation was short-lived and marginally productive. Had the vein yielded heavily, the mine would have been better equipped with lasting facilities, as many were around Nevadaville. And yet, a narrow wagon road was graded through the site below the ore sorting platform, reflecting at least some production of substance.

Circumstantial and material evidence support an 1860s timeframe. The Aetna Vein was discovered and developed in 1866, and the shafts were sunk on the vein's northeastern extension. The cut nails, the crude, applied bottle finish, and candlestick without hat-hook all date to the period.

Unknown Mine Condition and Integrity

The site is in poor condition due to natural deterioration and mine closure. All buildings, structures, and equipment had been dismantled long ago, leaving archaeological features. The lower shaft imploded and drew in the waste rock dump's main portion where small-scale features and most artifacts were probably located. DRMS closed the upper shaft by bulldozing in waste rock and then installing a grate. The closure damaged the shaft collar and waste rock dump, and erased any directly adjacent features. The dumps do, however, exhibit their original footprints and profiles. Sheetwash erosion spread sand across the site from upslope and cut furrows in the waste rock dumps, and evergreen saplings took root on the dumps.

The site retains a few aspects of integrity. The overall arrangement of mine workings and their dumps is apparent, conveying a broad-scale design of sorts. The bold waste rock dumps in a mining landscape setting conveys some feeling. But without meaningful feature and artifact assemblages, the site lacks integrity of materials, workmanship, and association.

Unknown Mine Significance

The site is significant as a contributing element of the landscape. The waste rock dumps are bold and visible from nearby vantage points, and prominent features along the Gilpin Tramway. The dumps lend important detail to the landscape evocative of small-scale and early mining.

As an individual resource, the site is recommended ineligible for several reasons. Under Criteria A and B, the site cannot be dated with certainty and archival research found little information. The site's historical associations are thus speculative. In terms of Criterion C, the site is a poor example of its resource type, a shaft mine, because integrity is insufficient and important character-defining features such as a clearly defined blacksmith shop platform absent. The site will also not yield important information upon further study.

Unknown Mine Management Recommendations

The site is a contributing element of the landscape, and its southeastern tip is on BLM tract. In terms of Section 106, conveyance of the tract from federal to local government control is an adverse effect because federal protections are lost. Mitigation may be required.

The site has some value for heritage tourism as a landscape element along the Gilpin Tramway. The waste rock dumps contribute to the feeling of mining. That said, no interventions for managing the site are warranted.

Unknown Mine Heritage Tourism Potential: Medium

The site has value as a historic landscape element on the Gilpin Tramway. But the site has little interpretation potential because of poor preservation and an unknown history. Improvements are not recommended.

Site 5GL.2187 Ninety-Four Prospect Complex ***Project: Land Disposal***

During the 1870s or 1880s, a group of prospectors discovered traces of what they named the Ninety-Four Vein crossing northeast over Maryland Mountain's southeastern spur. They dug several complexes of pits, trenches, and shafts in their attempts to pinpoint the vein and then track its strike once found. One of those prospect complexes is discussed here as 5GL.2187, and the other farther to the northeast is reviewed below as 5GL.2191. Ultimately, the party staked the Ninety-Four claim over the vein's main extend on the mountain's eastern flank.

One of those prospect complexes, the site discussed here, lies on the southwest face of the southeastern spur, at 8,501' elevation. The pits and trenches trend northeast-southwest in line with the vein. Slopes are steep, southwest-facing, and vegetated with open ponderosa pine forest and understory of sparse mountain mahogany. The Ninety-Four claim, now open space, was staked immediately northeast of the complex, its edge marked by a claim monument. Most of the complex is on BLM land.

Ninety-Four Prospect Complex History

Archival research found very little information regarding the Ninety-Four claim, and nothing regarding the prospect complexes. It seems likely that prospectors found and probed the vein during the area's 1870s or early 1880s exploration period. William H. Smith owned the claim by 1900 and had it surveyed for patent, long after the vein had been identified.

Ninety-Four Prospect Complex Description

The Ninety-Four Prospect Complex is a northeast-southwest alignment of thirteen probes, a platform, and a claim monument. The excavations follow a pattern characteristic of a planned sampling strategy, and they hint at the complex's development sequence.

The prospecting party probably determined that the vein crossed through the area by observing mineral samples brought to the surface. Without knowing exactly where the vein lay, they began by digging several pits to expose bedrock, most likely the seemingly randomly placed F13 and F9. F13 is 4' in diameter and 1' deep while F9 is 7' in diameter and 4' deep. The prospectors likely dug a third pit (F12) in a minor drainage in between where soil was thinnest. Drainages were generally recognized as expressions of geological anomalies such as mineralized veins. F12 took form as a pit 12' in diameter and as deep, although storm runoff backfilled it to a depth of 5'. F12 or a second, smaller pit in the drainage (F11) could have revealed the vein.

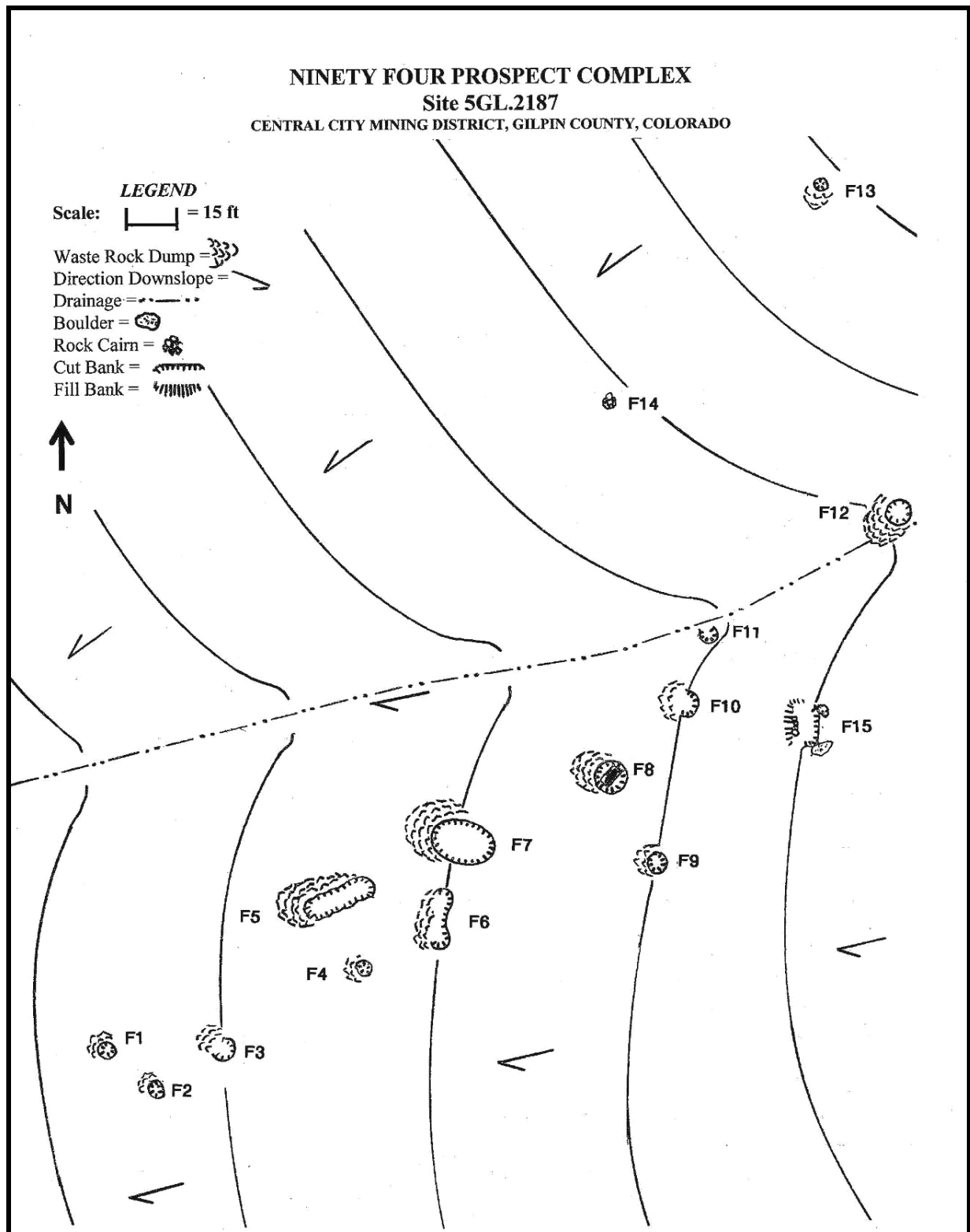


Figure 4.71: Plan View of Ninety-Four Prospect Complex, 5GL.2187.

Understanding local geology, the prospectors projected the vein's northeast-southwest strike and neatly tracked it with a tidy series of excavations (F1-F10) approximately 200' long. Most of the excavations were shallow pits intended to expose bedrock and confirm the vein's presence. The pits ranged in size from 3'x4' in area and 6" deep (F2) to 7'x9' in area and 3' deep (F10). But near the center of the complex, the prospectors unearthed promising indications and blasted into bedrock for deeper sampling. One of the probes was a trench (F5) initially 6' wide, 22' long, and 2' deep, but the prospectors pursued a mineralized pocket at the northeastern end, blasting out a chamber 8' deep. A short distance farther northeast, they encountered another lead and dug an ovoid pit (F7) 12'x18' in area and around 12' deep, now backfilled to a depth of 6'. One of the better indications of ore was even farther northeast where the prospectors began an exploratory shaft (F8) to sample it at depth. They blasted out a chamber 4'x5' in area and 12' deep, heaving waste rock downslope. The chamber is presently fairly well-preserved but filled to a depth of 6'.

The extensive work in hardrock dulled picks and drill-steels, which had to be sharpened by a blacksmith. The site's platform (F15) was probably an open-air shop for the purpose. Graded with cut-and-fill methods, the platform was 8'x9' in area and retained by a 1' high rock wall. Presently, the platform is difficult to perceive because half of the wall is collapsed, the cut-bank eroded, and the surface blanketed with duff and erosional deposits. Without a supporting artifact assemblage, suggestions that the platform was a blacksmith station are speculative.

The prospectors defined the vein to their satisfaction by developing 5GL.2187 and 5GL.2191 discussed below. Once this was done, they staked the Ninety-Four claim, starting at the northeastern end of 5GL.2187. The prospectors erected a monument (F14) to mark the claim's center-point. Like many in the area, the monument consists of a pointed granite slab 18" high surrounded by a rock ring.

Despite the intensive effort, the prospectors left few artifacts, with none being visible today. The site also lacks buried archaeological deposits. The prospecting project generated no cultural strata, and the deposition environment is too steep for accumulation.

Ninety-Four Prospect Complex Interpretation

The site represents a substantial effort to find the Ninety-Four Vein and track it once discovered. The linear pattern indicates that the prospectors were experienced and understood local geology. As a result of their expertise they dug only a handful of extraneous, randomly located pits before honing in on the vein. Most of the pits were small and shallow, intended to expose bedrock and verify the vein's presence, but the deeper trench, pit, and shaft were for deeper examination and sampling. The effort was ultimately a bust, and the prospectors staked their claim on a better section to the northeast.

Ninety-Four Prospect Complex Condition and Integrity

The site is mixed in its preservation. All the pits are naturally backfilled with sand to varying degrees, the smaller ones being subtle and somewhat difficult to perceive. What had been the beginnings of a shaft (F8) are eroded and backfilled to the point of appearing as no more than a ragged pit. The platform is almost indistinct and lacks character-defining attributes and artifacts. The site is also concealed by young ponderosa pine and fir forest.

The site has a few aspects of integrity. The distinct northeast-southwest pattern conveys the prospect party's intentional sampling strategy based on experience, which qualifies as design. The setting is also evocative of prospecting. But without intact buildings, structures, or character-defining features and artifacts, the site lacks integrity of materials, workmanship, association, and feeling.

Ninety-Four Prospect Complex Significance

The site does not contribute to the landscape because it is concealed by forest and almost undetectable. The features are also subtle and invisible except upon immediate observation.

The site is recommended ineligible in itself. Under Criteria A and B, the site's historical associations are unknown because a date cannot be established, and archival research found no information. In terms of Criterion C, the site is not an outstanding example of its resource type, a prospect complex. An artifact assemblage and character-defining features necessary for eligibility, such as a distinct blacksmith field forge, are absent. The site will also not yield important information upon further study.

Ninety-Four Prospect Complex Management Recommendations

The site is a non-contributing element of the landscape and is recommended ineligible in itself. Given this, the Land Disposal will have no effect in terms of Section 106.

Ninety-Four Prospect Complex Heritage Tourism Potential: None

The site has no potential.

Linear Resource 5GL.2190
Project: Land Disposal

Mary Ella No.2 Mine Road

The Mary Ella No.2 Mine (5GL.721) was a shaft operation high on Maryland Mountain's east face. During the 1870s or 1880s, the operators graded a simple road up the mountain's southeastern spur for wagon service. Construction of the Gilpin Tramway railroad along the mountain's lower skirt in 1887 erased the road's original starting point, so the road was adapted to begin on the railroad grade. The grade is 8,350' elevation, and the mine is 8,680' elevation. The road ascends along the southeastern spur's crest, featuring stands of second-growth ponderosa pines and Gambel oak in open meadow. Most of the road's southeastern half crosses BLM land and the remainder open space.

Mary Ella No.2 Mine Road History

Archival research found no information regarding the Mary Ella No.2 or its road.

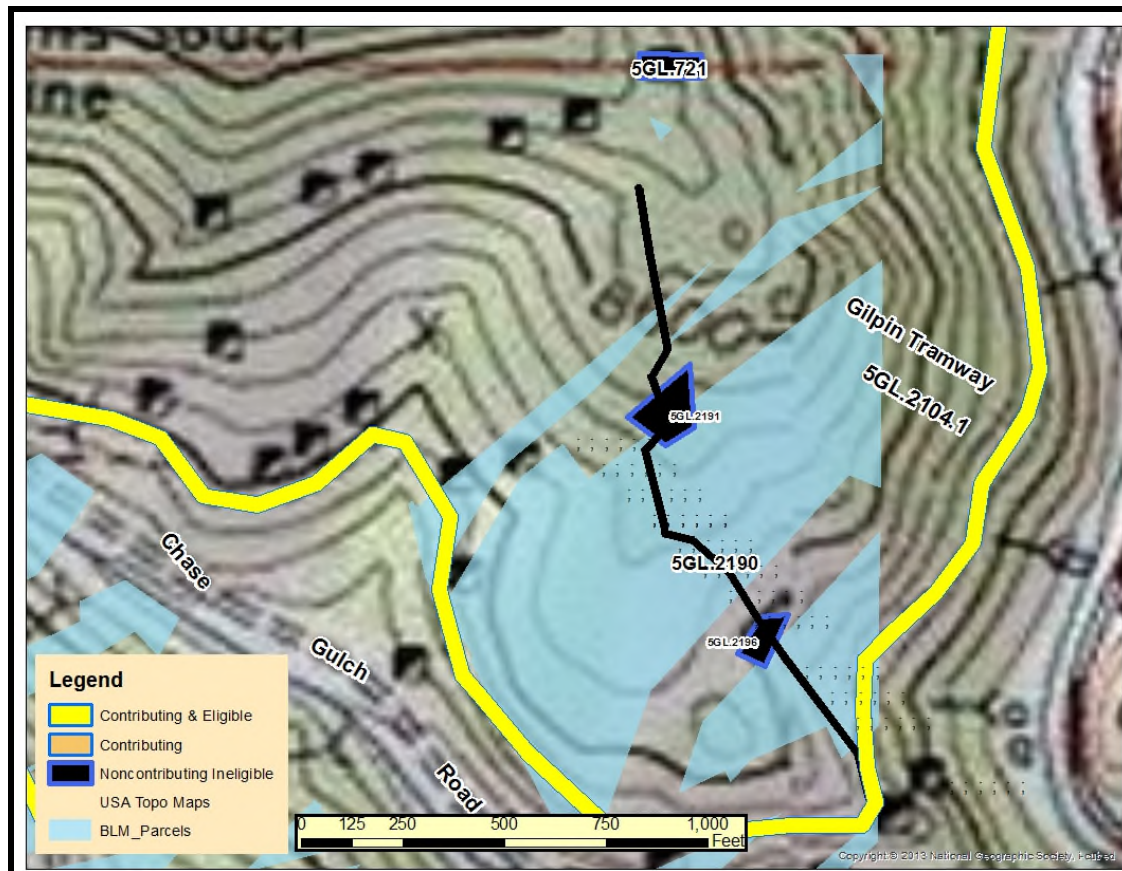


Figure 4.72: The enlarged topographic map illustrates Mary Ella No.2 Mine Road, 5GL.2190, and adjoining resources. 5GL.2191 = Ninety-Four Prospect Complex; 5GL.2196 = South Bend Prospect Complex.

Mary Ella No.2 Mine Road Description

The road begins on the Gilpin Tramway railroad grade, where the grade wraps around Maryland Mountain's rocky southeast spur, and ascends 1,760' to the mine. Ascent is steep but gradual enough for two-way wagon traffic. The road can be described in six segments separated by abrupt changes in course and prospect complex landmarks.

Segment 1 begins on the tramway bed and ascends transversely northwest 440' across a steep slope to a prospect complex (Site 5GL.2196). Workers graded the segment with cut-and-fill methods, arranging rocks exhumed during construction along the downslope edge to hold fill in place. Along some portions, the workers purposefully aligned large rocks to retain cobble fill and a sand tread. The entire segment features a smooth tread of sand 7' wide with a distinct cut-bank.

Segment 2 extends 80' through the South Bend Prospect Complex (Site 5GL.2196). The segment ascends steeply and completes a shallow S as it negotiates several deep gullies created by erosion. The road crosses below the east end of one gully and crosses the west head of another. Workers graded the road with cut-and-fill methods, erecting a rock wall 2' high to retain the bed out of the gully. Slightly overgrown, the tread is 7' wide and the cut-bank distinct.

Segment 3 ascends steeply northwest from the prospect complex 310' to the crest of Maryland Mountain's southeastern spur. Workers cut the segment from an extremely rocky slope, scattering rubble and soil downslope and east. Traffic wore away most of the surface, leaving a tread of bedrock crossings and exposed boulders. Where the grade lessens, the tread features more soil but is a depressed channel 6' wide and 1' deep. When the road crests the ridge, it curves abruptly northwest.

Segment 4 begins at the abrupt curve on the ridge and ascends 325' north-northwest to the Ninety-Four Prospect Complex (5GL.2191). The road is still an eroded furrow 6' wide and 2' deep lined with cobbles thrown there by teamsters.

Segment 5 ascends northerly 175' from the Ninety-Four Prospect Complex to an abrupt left turn. The road leaves the complex as a channel 7' wide and 1' deep, climbs steeply through the open terrain of a rounded ridge, and becomes braided with multiple tracks. The route constricts back into a trough and reaches gentler ground, curving northward.

Segment 6 begins at the curve and ascends 410' north-northwest to a two-track bulldozed by DRMS during the late 1980s for closure of the Mary Ella No.2. The two-track erased the historic road's final 260' to the mine. The historic road crosses a gentle southwest-facing slope requiring only minor cut-and-fill work. The segment appears as a sandy corridor 9' wide with a low cut-bank.

Mary Ella No.2 Mine Road Interpretation

The Mary Ella No.2 Road is typical of mine-specific roads throughout the Rocky Mountains. Its builders chose a route requiring the least amount work and capital investment. The road ascended to the crest of Maryland Mountain's southeastern spur, and then followed the crest to the mine. The route became a compromise in distance, steepness, and quality. On the crest and in open terrain, the builders got by with minimal preparation, using cut-and-fill methods across some slopes, but merely moving large rocks and allowing traffic to establish the route along most of the route. Without the solid bed intentionally constructed like the district's other roads, the Mary Ella No.2 easily eroded into a trough for much of its length with rocks becoming exposed over time. The rocks took their toll on wagons and slowed traffic, and eventually had to be removed and heaved downslope. Portions of the road are presently lined with exhumed rocks.

Mary Ella No.2 Mine Road Condition and Integrity

The road is in marginal condition. *Segment 1* is preserved and distinct with clear cut-banks and intact sections of rock retaining walls. But the other segments were poorly graded if at all and have become overgrown troughs that are subtle and difficult to trace. *Segments 5* and *6* are nearly uninterpretable.

The road retains poor integrity. Design of route is difficult to perceive because much of the road is a faint trough. The bed itself was created largely by wagon traffic and has no integrity of design, materials, workmanship, association, or feeling of wagon transportation. The Maryland Mountain setting is excellent.

Mary Ella No.2 Mine Road Significance

The Mary Ella No.2 Road does not contribute to the landscape because it is nearly undetectable for most of its length. The road is too overgrown and subtle.

The road is recommended ineligible on its own. Under Criteria A and B, archival information found no information about the road or mine. Its timeframe, and therefore historical associations, are uncertain. In terms of Criterion C, the road is not a good example of its resource type, a mine-specific road, because it lacks sufficient integrity. The road will also not yield important information because it was not a link in a larger network.

Mary Ella No.2 Mine Road Management Recommendations

The road is a non-contributing element of the landscape and is recommended ineligible on its own. Given this, the Land Disposal will have no effect in terms of Section 106.

The road does have some heritage tourism potential as a recreational trail route. The following actions might be considered:

- Use the road as a link between the Gilpin Tramway and existing bulldozed road on Maryland Mountain's south face. The road could also tie into trails graded along the mountain's east face.
- Thin vegetation on road.

Mary Ella No.2 Mine Road Heritage Tourism Potential: High

The road has good potential for use as a recreational trail connecting Gilpin Tramway with bulldozed road on Maryland Mountain's south face, and new trails on east face.

Site 5GL.2191 Ninety-Four Prospect Complex ***Project: Land Disposal***

The site is one of two prospect complexes dug to find the Ninety-Four Vein and then track it once discovered. The other is 5GL.2187. The site discussed here is on the Ninety-Four claim, now open space, but its southeastern portion extends onto BLM land. The site is on the crest of Maryland Mountain's southeastern spur, 8,610 elevation, amid open ponderosa pine forest. Mary Ella No.2 Mine Road (5GL.2190) ascends north-south through the complex. DRMS bulldozed the site's shaft closed during the late 1980s or 1990s but did not record the site.

Ninety-Four Prospect Complex History

Archival research found no information regarding the site. See 5GL.2187 for a general overview of the Ninety Four.

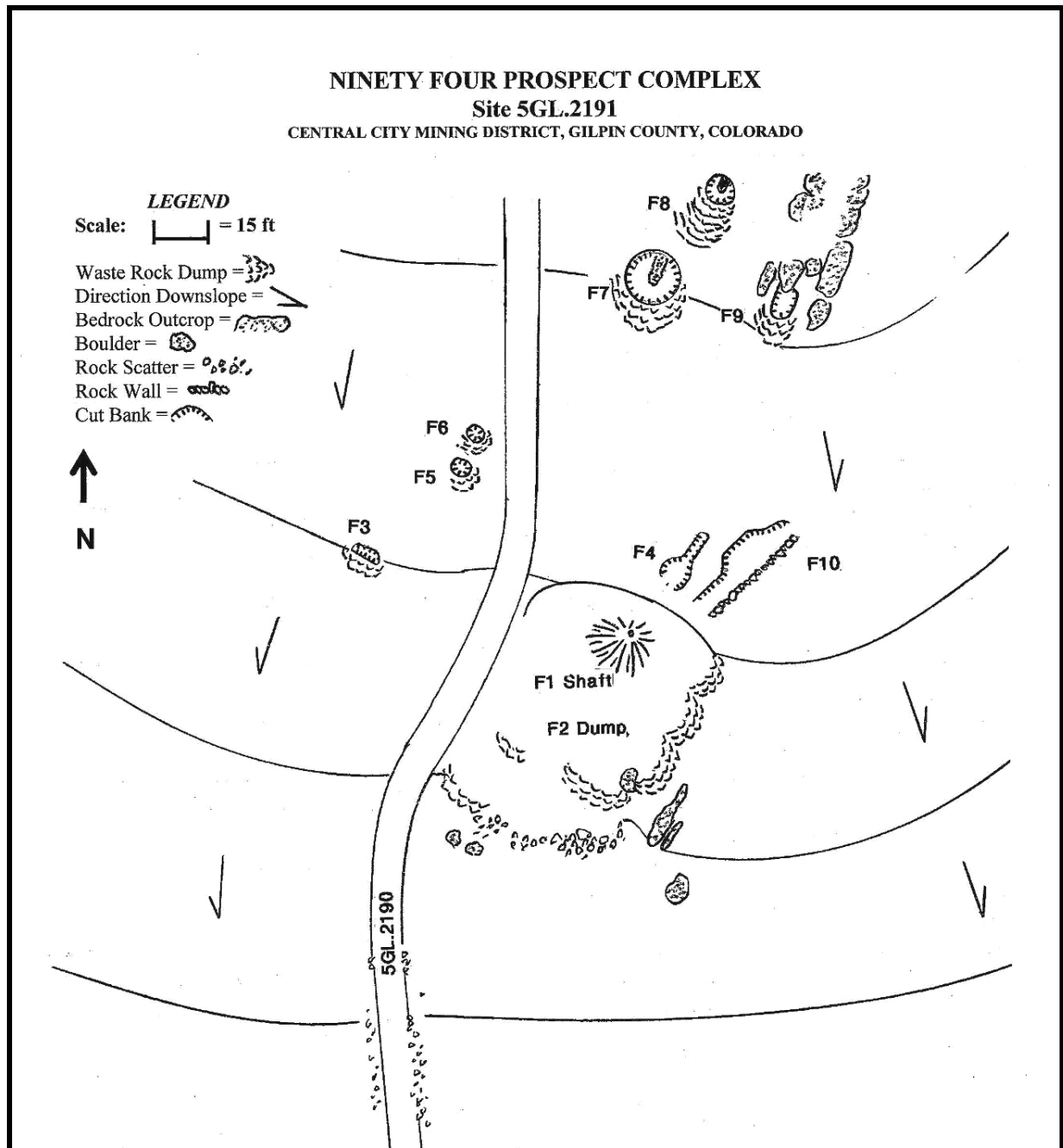


Figure 4.73: Plan view of Ninety-Four Prospect Complex, 5GL.2191.

Ninety-Four Prospect Complex Description

The site encompasses two linear groups of pits, trenches, and shallow shafts. Prospectors came to suspect that the Ninety-Four Vein passed through the area by observing linear granitic dyke (bedrock formation) trending northeast-southwest. As was common, they chose to sample

the contact zone on one of the dyke's sides, often a plane of weakness where veins were injected when underground and under pressure.

In this case, the prospecting party close to sample the dyke's northwestern contact and began by digging the western-most probe. The probes include a trench 4' wide and 7' long (F3), and two pits 6' in diameter and 2' deep (F5, F6). Tracing the contact to the northeast, the prospectors invested effort in exposing and then sampling it. They dug one of the site's largest pits (F7), 12' in diameter and 5' deep, revealing the contact in the northwest wall. The prospectors ascended a short distance northeast and excavated the second probe (F8), another pit 4'x7' in area and 2' deep. Again encountering the contact, the prospectors blasted out a sample cut 2' wide, 3' long, and 5' deep, which is still open. The contact zone proved barren, so the party tried the dyke itself to the east.

The prospectors dug two probes to examine the dyke's makeup in greater detail. One (F9) was a pit 5'x7' in area and 4' deep blasted into solid rock. The next began as a trench 3' wide, 15' long, and 2' deep oriented northeast-southwest. Upon finding mineralization, the prospectors dug deeper into the southwest end, enlarging it with a small pit 3' in diameter and 3' deep.

The mineralization tantalized the party into sinking a shaft (F1) for sampling at depth. Unfortunately, little can be observed because DRMS backfilled it by bulldozing in its dump during the late 1980s or early 1990s. The shaft is now marked by a pipe monument, and the waste rock dump (F2) is a rocky smear 45'x62' in area. Evidence indicates that the prospect outfit employed a whip hoisting system to winch an ore bucket out of the shaft. Named after the common horse whip, the system included a tripod headframe over the shaft, a pulley on the headframe, and an ore bucket at the end of a rope. A draft animal walked a linear track away from the shaft and pulled the rope, which raised the bucket in the shaft. The site's track (F10) is characteristic of the system in that it is a narrow and elongated platform aligned with the shaft, retained by a dry-laid rock wall, but with no attempt at leveling. The wall holds back a soft surface of sand and gravel fill, and the entire platform descends slightly toward the shaft. The platform itself is 7' wide and 30' long, but the entire track was at least 60' long.

The site presently lacks artifacts, although DRMS could have pushed the site's assemblage into the shaft. Buried archaeological deposits are absent because activity was brief and limited to prospecting, which tended not to generate materials in volume. Privy pits could not be found.

Ninety-Four Prospect Complex Interpretation

The site is an expression of an organized and planned effort to find the Ninety-Four Vein and sample it once uncovered. Uncertain exactly where the vein was hidden, the prospecting party began by probing and then sampling a contact along the northwest side of the area's granitic dyke. Deep pits proved the contact zone barren of ore, so they focused on the dyke itself and found enough indication to justify blasting an exploratory shaft. Rather than rely on a hand windlass as a hoist, the party employed a whip and constructed a linear track for the draft animal. The track was only 60' long or slightly more, reflecting the shaft's depth. Curiously, the site has no evidence of a blacksmith shop, which were typically stationed at substantial prospects.

Ninety-Four Prospect Complex Condition and Integrity

The site is in poor condition. The large pits are obvious and fairly well preserved, but the smaller excavations are overgrown, partially filled with erosional sediment, and somewhat subtle. The shaft and its dump have been destroyed by mine closure during the late 1980s or early 1990s. When DRMS bulldozed the dump into the shaft, it destroyed any small-scale features and artifacts that may have been present at one time. A pipe monument marks the shaft, and a rocky smear the dump.

The site has poor integrity primarily because of mine closure. Overall, the prospects conform to a pattern characteristic of organized, planned sampling strategies. The pattern can be considered a type of design. With the shaft destroyed and artifacts absent, however, the site has no integrity of materials, workmanship, or association. The site also has marginal feeling because most prospects are subtle and the shaft was destroyed. The setting is good.

Ninety-Four Prospect Complex Significance

The site is not a contributing element of the landscape because it is isolated, its features are subtle, and cannot be detected from vantage points.

The site is also recommended ineligible on its own. Under Criteria A and B, the site's historical associations are unknown because a date cannot be established, and archival research found no information. In terms of Criterion C, the site is not an outstanding example of its resource type, a prospect complex. An artifact assemblage and character-defining features necessary for eligibility, such as a distinct blacksmith field forge, are absent. The site will also not yield important information upon further study.

Ninety-Four Prospect Complex Management Recommendations

The site is a non-contributing element of the landscape and is recommended ineligible in itself. Given this, the Land Disposal will have no effect in terms of Section 106.

Ninety-Four Prospect Complex Heritage Tourism Potential: None

The site has no potential.

Site 5GL.2195 Prospectors' Camp ***Project: Land Disposal***

A prospector constructed a primitive, temporary stone cabin as a seasonal shelter during his exploration of Maryland Mountain's east face. He built the cabin on a platform cut from an extremely steep east-facing slope, in a gap 20' wide between granite bedrock outcrops. Making up much of the slope, the outcrops are elongated and feature vertical faces trending northeast. Elevation is 8,560', and second-growth ponderosa pines grow between the outcrops. The site's southeastern quarter is on the Enterprise claim while the remainder is on BLM land.

Prospectors' Camp History

In-depth archival research found no information regarding the site.

Prospectors' Camp Description

The resource is remarkably simple, limited to the cabin ruin, a claim monument, and a handful of artifacts. When intact, the cabin (F1) was 11'x13' in plan and nestled into a platform cut from soil in between granite outcrops. The northwest wall was the flat face of one of the outcrops, which was 10' high. The northeast wall had been some combination of rocks and lumber, while the southeast wall was a dry-laid rock wall on another outcrop, with a gap for the doorway. The southwest wall was at one time 6' high, assembled with dry-laid rocks, and had a built-in fireplace 1½'x2' in area 3' above the cabin's earthen floor. All rockwork was made from local granite slabs mortared with sand, some having been split on-site by hand with chisels hammered into shallow drill-holes, a traditional practice.

Presently, the cabin's footprint is clearly evident and most of the southwest wall still stands, including the fireplace. The northeast and southeast walls, however, have collapsed and filled the interior with rubble. A few large general artifacts are scattered around, and corrugated sheet iron among them indicates that the shelter was reused and repaired sometime after around 1895. Thick duff conceals additional artifacts, especially downslope. The terrain is too steep for buried archaeological deposits.

The prospectors marked the northwest corner of the Enterprise claim with a typical monument (F2). They stood a pointed slab 3' high and 6" wide on end in the ground and bolstered it with small boulders. The slab gradually slumped northeast.

The site has a disappointingly impoverished artifact assemblage scattered southwest and east. Several pieces of lumber and corrugated sheet iron are the only structural materials. A hand-made spout, several cut sheet iron scraps, and a 1-gallon bulk can are the sole industrial items. A bucket and basin are the site's two domestic artifacts. Food cans, broken bottles, and tableware are curiously absent.

Prospectors' Camp Interpretation

Little can be observed about the site because its artifact assemblage is limited to only a handful of overly generic items. It can be assumed, however, that the cabin was occupied briefly and probably on a seasonal basis. Occupation was necessarily brief because far-away North Fork of Clear Creek was the nearest water source, and the site had no tank for storage. The rockwork instead of lumber walls, and choice of a built-in fireplace over more common woodstoves, suggest an 1860s or 1870s timeframe, although this is highly speculative and unsupported by material evidence.

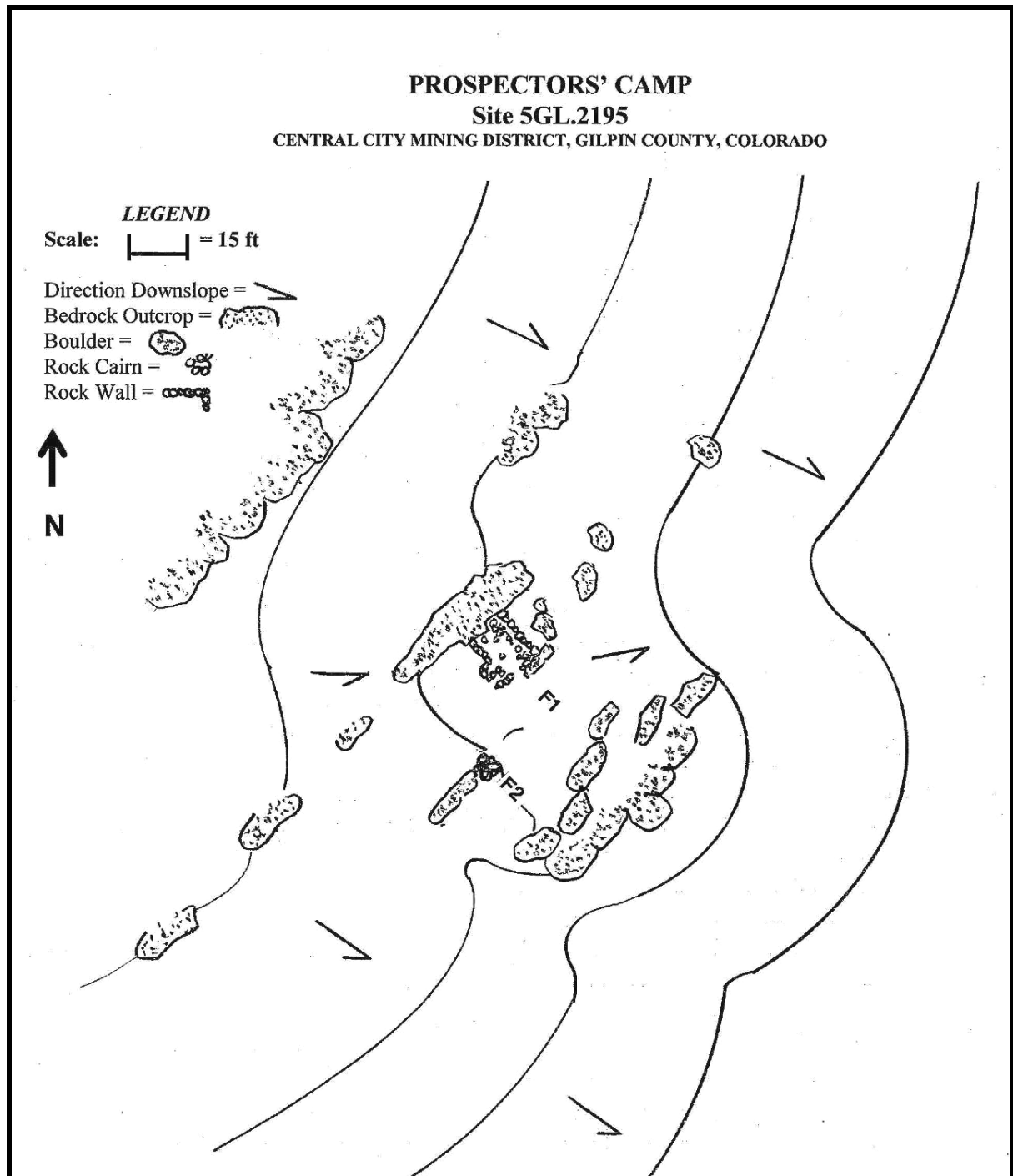


Figure 4.74: Plan view of Prospectors' Camp, 5GL.2195.

Prospector's Camp Condition and Integrity

The site is in poor condition because of natural deterioration. The cabin's walls collapsed except for the lower half of the southwestern and bedrock face of the northwestern. The rubble accumulated in the interior and then gradually trapped sand eroding down from above. The cabin

is now difficult to distinguish. The site also lacks the type and volume of domestic refuse expected of prospectors' camps. Food cans, bottle glass, tableware fragments, and domestic hardware is totally absent. And yet, the built-in fireplace confirms the cabin as a residence.

Integrity is marginal. The cabin's footprint and built-in fireplace are interpretable, and these attributes are arguably aspects of general design. But without standing walls or structural debris on-site, the cabin lacks integrity of materials, workmanship, and feeling. Without a character-defining artifact assemblage, the site also lacks integrity of association.

Prospector's Camp Significance

The cabin is not a contributing element of the landscape because it is isolated, difficult to interpret, and cannot be detected from vantage points.

The site is also recommended ineligible on its own. Under Criteria A and B, the site's historical associations are unknown because a date cannot be established, and archival research found no information. In terms of Criterion C, the site is not an outstanding example of its resource type, a prospectors' camp. A well-defined cabin remnant and a character-defining artifact assemblage are absent, and both are necessary for eligibility. The site will also not yield important information upon further study because buried deposits, a rich surface artifact assemblage, and a complex feature assemblage are not present.

Prospector's Camp Management Recommendations

The site is a non-contributing element of the landscape and is recommended ineligible in itself. Given this, the Land Disposal will have no effect in terms of Section 106.

Prospector's Camp Heritage Tourism Potential: None

The site has no potential.

Site 5GL.2196 South Bend Prospect Complex ***Project: Land Disposal***

Prospectors discovered a mineralized vein crossing northeast over Maryland Mountain's southeastern spur by digging several separate, self-contained clusters of pits. They subsequently claimed the vein as the South Bend. One of the pit clusters, which lies near the claim's center (now open space) is discussed here. The two southern pits are on a BLM land tract. The Mary Ella No.2 Mine Road (5GL.2190) was incidentally graded through the site between several of the pits. Slopes are steep, east-facing, and vegetated with mixed ponderosa pine forest and an understory of Gambel oak and grass. Elevation is 8,480', and an erosional gully descends east through the site.

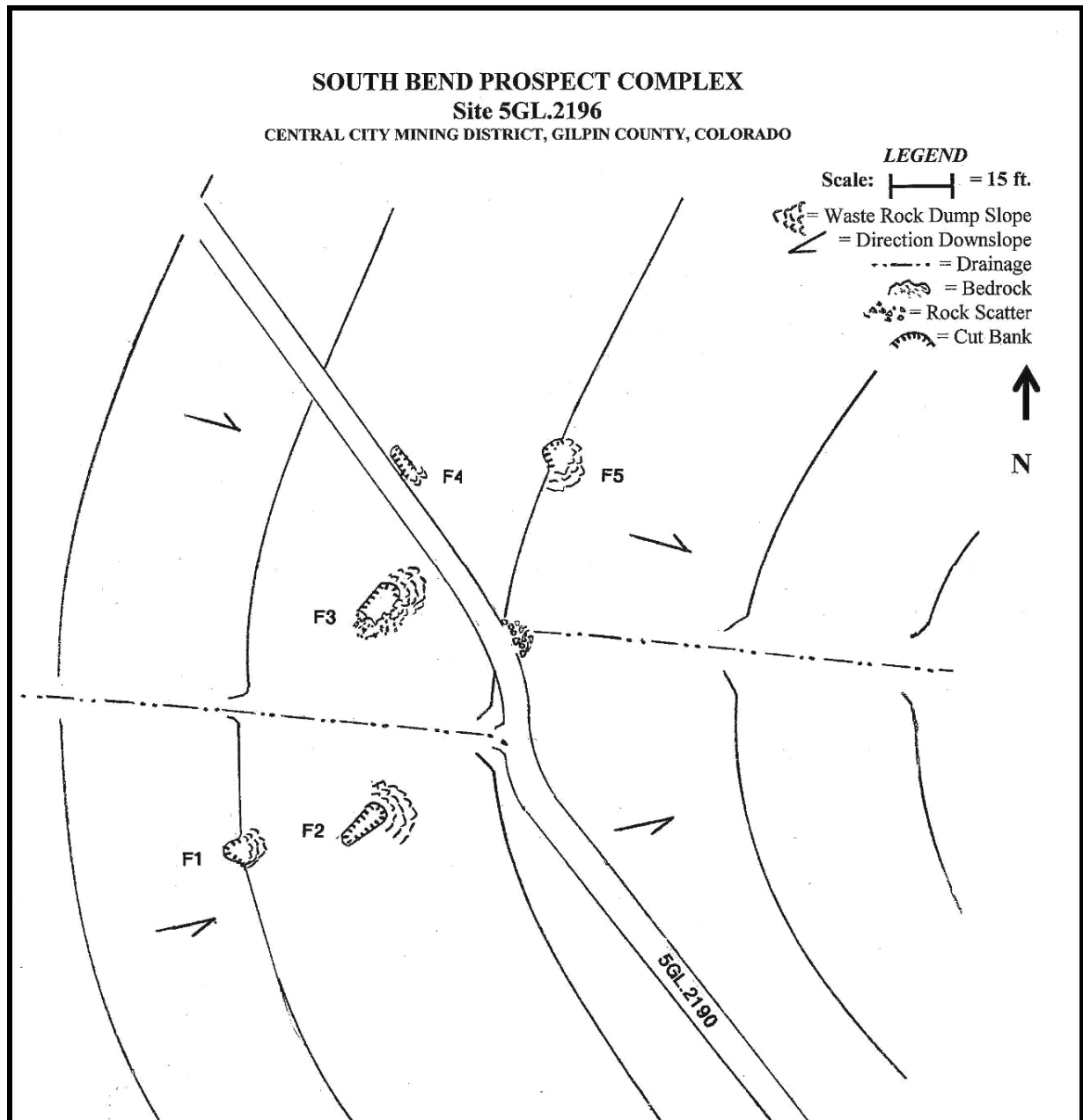


Figure 4.75: Plan view of the South Bend Prospect Complex, 5GL.2196.

South Bend Prospect Complex History

Archival research found little information regarding the South Bend, and nothing on the prospect complex. The claim was staked sometime after 1872, and Charles H. Beach owned it by 1890. He had bored a tunnel southwest along the vein from the bank of North Fork of Clear Creek and applied for a patent in 1892. Claim survey plats do not show the prospect complex.

South Bend Prospect Complex Description

The site is limited to five pits and trenches seemingly dug at random. In their search, the prospectors probably excavated the southern two and northern two probes first. The southern probes include a semi-circular pit 4x6' in area and 1' deep (F1), and a trench 5' wide, 12' long, and 4' deep (F2). The northern probes are a trench 4' wide, 10' long, and 2' deep (F4), and another pit 5'x8' in area and 1' deep (F5). The excavations apparently bracketed the vein. Guided by this, the prospectors blasted out a single probe (F3) at center and revealed the vein, which was barren of gold. The probe is a well-formed chamber in mineralized rock 6'x9' in area and 3' deep.

The site lacks artifacts and buried archaeological deposits. Activity was brief and limited to prospecting, which tended not to generate materials in volume.

South Bend Prospect Complex Condition and Integrity

The site is in poor condition. All the probes except the central one are overgrown with brush and partially filled with erosional sediment. The central pit is well-defined.

The site has poor integrity. The prospects appear haphazard and do not reflect an organized, planned sampling strategy (a type of design). The site has no integrity of materials, workmanship, or association because the feature assemblage is simple. The site also has marginal feeling because most prospects are subtle. The setting is good.

South Bend Prospect Complex Significance

The site is not a contributing element of the landscape because it is isolated, its features are subtle, and it cannot be readily detected from vantage points.

The site is also recommended ineligible on its own. Under Criteria A and B, the site's historical associations are unknown because a date cannot be established, and archival research yielded no information. In terms of Criterion C, the site is not an outstanding example of its resource type, a prospect complex. An artifact assemblage and character-defining features necessary for eligibility, such as a distinct blacksmith field forge, are absent. The site will also not yield important information upon further study.

South Bend Prospect Complex Management Recommendations

The site is a non-contributing element of the landscape and is recommended ineligible in itself. Given this, the Land Disposal will have no effect in terms of Section 106.

Site 5GL.2197 Billings Mine ***Project: Land Disposal***

The Billings Mine involved a tunnel driven southwest along the Billings Vein. The site is in Chase Gulch on Bates Hill's north base, at the west end of Black Hawk's Chase Street neighborhood. Quartz Creek enters a culvert at the waste rock dump's north toe. Bates Hill rises

steeply to the south and is overgrown with a thick doghair fir forest. Elevation is 8,200'. The site lies within the NHL, and a narrow BLM tract crosses the waste rock dump.

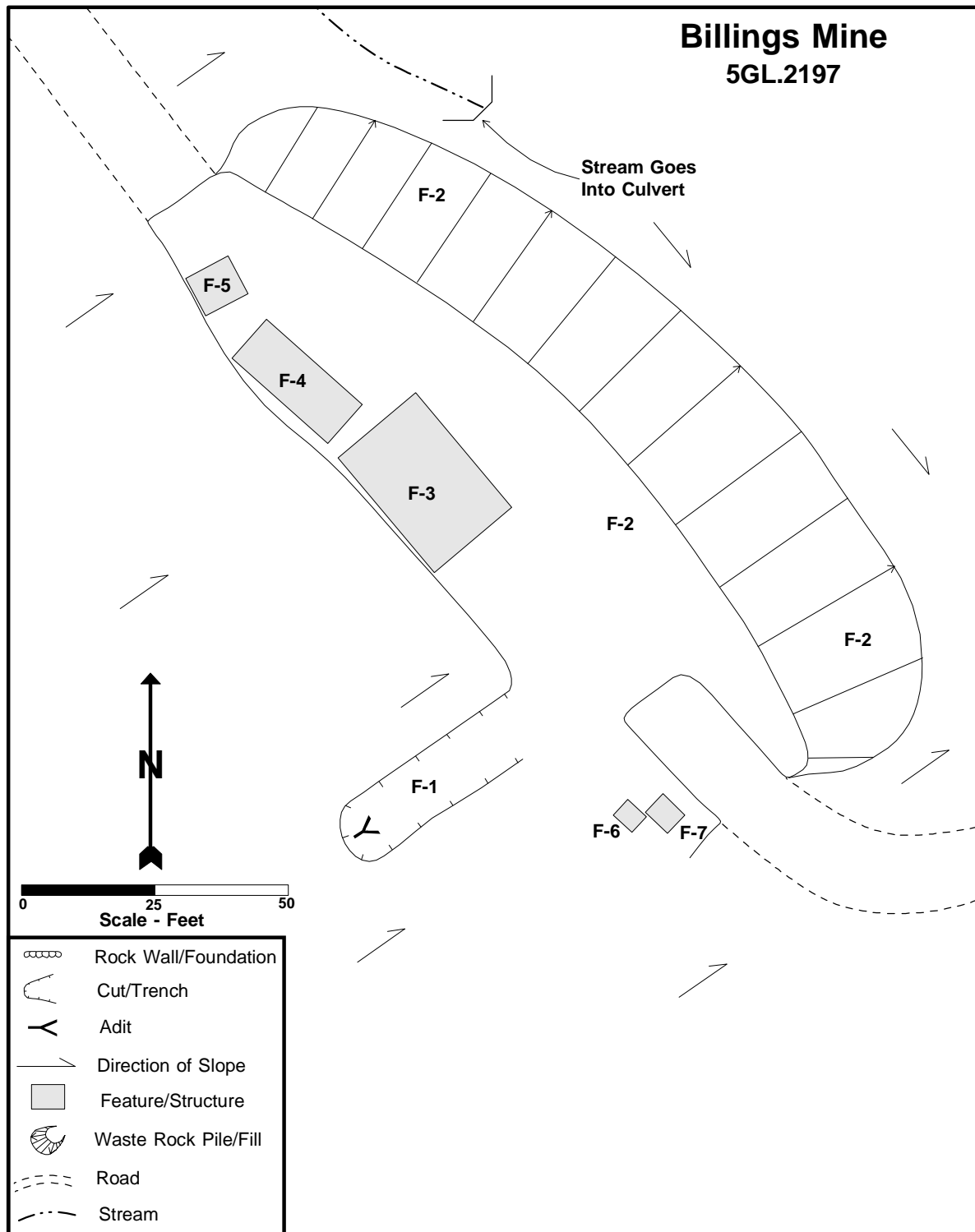


Figure 4.76: Plan view of Billings Mine, 5GL.2197.

Billings Mine History

Prospectors discovered the Billings Vein in 1861 by uncovering an outcrop on top of Bates Hill. They followed the vein's northeast strike to the floor of Chase Gulch and staked what they had found as the Billings claim. For several years, the discoverers extracted rich gold ore from shallow workings immediately above Casey Street. Eventually the easily treated ore was used up and the mine went idle.⁵⁰

John H. Schweder, possibly one of the original miners, owned the property and had it surveyed for patent in 1872. He sold it to Elias Goldman and Jacob Mack within a few years.⁵¹

In 1881, Denver publisher J.C. Kennedy determined that the Billings offered good potential for ore at depth because the vein had never been properly developed. He rallied Missouri investors to form the Valley View Mining & Milling Company and bought an interest in both the Billings and Harkaway on Negro Hill. Planning to undercut the Billings Vein from the lowest point, the company sited the Billings Tunnel at Bates Hill's north base and struck rich gold ore by the summer of 1881. Production began and the tunnel reached 400' in 1882, when internal litigation froze the operation. Kennedy and Goldman made fitful attempts to reopen the mine, but were unsuccessful.⁵²

The mine was closed for such a long period of time that company officials (and even their heirs) forgot about it. Archival sources make no further mention of the property. Someone did, however, reopen the tunnel sometime after the 1950s. Colorado Mine Inspection Reports provide detailed documentation of all mines active after 1915, but offer nothing on the Billings. The operation was either clandestine or ran under a different name.

Billings Mine Description

The site consists of the Billings Tunnel and a cluster of recent buildings on its reclaimed dump. All the site's features are less than 50 years old. The last operator used heavy equipment to clean out the tunnel portal (F1) and expose a solid bedrock heading, creating a trench 11' wide and 48' long. The operator then erected a cap-and-post timber structure consisting of 8"x8" timbers and 3"x12" planks. The tunnel portal has since collapsed, crushing most of the structure.

During the 1880s, miners dumped waste rock along the slope extending northwest from the tunnel portal, building up a bench of material (F2) 57'x168' in area and 8' thick. The top-surface is 30'x135' in area and scraped flat with a bulldozer to accommodate the existing buildings. The dump's flanks were stabilized and reclaimed in the recent past.

A shop, privy, and three storage sheds stand on the dump. The shop (F3) is a northwest facing frame building 19'x28' in plan with a shed roofline 11½' high at front and 10½' at rear. The building consists of corrugated sheet iron cladding over 1" thick planks nailed to a post-and-girt frame of 2"x4" boards. The roof is made of asphalt shingles tacked to plank decking on rafters. The front features a 66"x66" window and rollup garage door, and the rear features a similar window and 34"x80" panel door. The electrical meter is recent and on-line.

Adjacent is a storage building (F4) 10'x24' in plan and northeast facing with a shed roofline 10½' high at front and 9' at rear. The walls consist of sheet iron nailed to a 2"x4" post-

⁵⁰ Wickersheim and LeBaron, 2005:169.

⁵¹ *Mineral Claim Survey Plat: Billings*; Wickersheim and LeBaron, 2005:169.

⁵² *Colorado Mining Directory*, 1883:311; *Rocky Mountain News* 5/21/81 p3 c1; *Rocky Mountain News* 7/28/81 p4 c6; *Rocky Mountain News* 6/24/82 p5 c1; "Mining News" *EMJ* 7/14/83 p23.

and-girt frame, and the roof is made of tarpaper shingles nailed to plank decking over rafters. The northwest side has a fixed 45"x22" window, and the northeast side two salvaged 36"x80" doors. Filing cabinets and other office materials are inside the building.

Another storage building (F5) stands to the west. The building is northeast-facing, front-gabled, 8'x9' in plan, 6' high at the eaves, and 10' at the gable peak. The walls are assembled with various materials: ribbed paneling on the southeast, planks on the southwest and northwest, and plywood on the northeast. The roof consists of tarpaper over planks, and the foundation is composed of miscellaneous timber bolsters. The northeast front has a 30"x70" hollow-core door.

The privy (F6) stands east of the tunnel. The building is 4'x5' in plan, northwest-facing, with a shed roofline 7' high at front and 6' high at rear. The privy consists of sheet iron nailed to a post-and-girt frame of finished 2"x4" and 2"x6" studs, with a canvas sheet as a door. The pit underneath is around 3' in diameter and 3' deep with little in it.

Adjacent to the privy is a tool shed (F7) 5'x6' in plan, front-gabled, 4½' high at the eaves, and 6½' high at the peak. The walls and roof consist of sheet iron nailed to planks, and the front features a 28"x60" door.

The site lacks historic features and buried archaeological deposits. The artifact assemblage is limited to structural materials that have been incorporated into the current buildings.

Billings Mine Interpretation

The existing buildings and excavated tunnel portal are typical of gold exploration projects developed from the 1960s through 1980s. As was common during this period, the operators used heavy equipment to prepare the site and scrape away historic features. The operators then erected simple frame buildings for shop work, administration, analyzing mineral samples, and storing equipment. Lack of an ore bin indicates that the project was unable to produce payrock in meaningful volume. But, the buildings are well-constructed and reflect some capital investment, a hallmark of a genuine effort.

Billings Mine Condition and Integrity

As a recent mine, the Billings is in good condition. The tunnel is readily identifiable and the buildings are well-preserved. The site also exhibits characteristic evidence of earthmoving by heavy equipment. As a historic resource, however, the site is in poor condition, as the last operators erased all previous features and artifacts.

As a recent mine, the site retains all aspects of integrity. The assemblage of buildings reflects overall design of the surface plant and conveys feeling and association of mining after circa 1965. The buildings also embody individual design, materials, and workmanship. But as a historic resource, the site has no integrity. The site's setting is good.

Billings Mine Significance

As a recent resource, the Billings Mine is a contributing element of the landscape. The site is an example of a tunnel mine less than 50 years old and its buildings appear historic to undiscerning observers. In content and design, the surface plant imitates the facilities that were at one time common among the area's tunnel mines.

As an individual resource, the Billings is recommended ineligible because it is less than 50 years old, which is the threshold defining a resource as historic.

Also because the site is less than 50 years old, it does not contribute to the NHL. In order to do so resources must date within the NHL's Period of Significance, 1859-1918.

Billings Mine Management Recommendations

The Billings does not contribute to the NHL and is recommended ineligible on its own. But the resource does contribute to the landscape. The Land Disposal, and its conveyance of the BLM tract from federal to local government has an adverse effect because the Billings contributes to the landscape.

The site has limited heritage tourism potential. The following suggestions may improve the site for use:

- Install name sign at nearby trailhead.
- Remove recent junk.
- Adapt buildings for reuse, possibly storage of trail equipment and supplies.

Billings Mine Heritage Tourism Potential: Medium

The Billings has some potential for heritage tourism development. Although the mine is not a historic resource, it is remarkably similar to how tunnel mines might have appeared in the area during the 1880s and later. The buildings should be adapted for use to prevent vandalism. A sign posted at the trailhead parking area below could identify the mine as the Billings.

Site 5GL.2198 Casey Street Dump ***Project: Land Disposal***

Casey Street Dump was named after the Casey Street neighborhood on Central City's northeast edge. The street begins in the city proper, extends east along the crest of Bates Hill, and then ends. The neighborhood consists of inhabited historic houses lining both sides of the street. Circa 1900, residents carried their household refuse to the street's end, turned northwest onto a short wagon road, and threw the rubbish down Bates Hill's north shoulder. The road at one time also provided access to the Nagle & Whiting Mine (unrecorded). The dump is approximately 8,380' elevation, and the shoulder curves away into a steep slope studded with granite ledges and cliffs. The hill was clear-cut in the past for firewood, but has since recovered with a healthy ponderosa, fir, and aspen forest. The dump's northwestern half is superimposed over a BLM land tract, and the site is within the NHL.

Casey Street Dump History

As with most community dumps, the Casey Street repository received no mention in archival sources. The neighborhood, however, was built during the 1870s and 1880s and has been

inhabited ever since. Residents probably first began dumping refuse on unoccupied land at the end of the street, and the site discussed here is not the area's sole refuse deposit.



Figure 4.77: The topographic map illustrates Casey Street Dump, 5GL.2198, the labeled polygon.

Casey Street Dump Description

Originally, neighborhood residents dumped their refuse directly on the ground along the Nagle & Whiting road's downslope, northeastern edge. They gave little thought to good disposal practices such as burial, incineration, or waste concentration, instead merely emptying rubbish cans and pitching large items downslope. The refuse historically consisted of broken bottles, tableware fragments, crockery, kitchen scraps, a variety of cans, and light hardware.

Over time, gravity has drawn the artifacts downhill, sorting them by size and material. Small heavy materials, primarily glass and tableware, presently remain in the grass and brush over the road's edge. Medium-sized artifacts such as food cans, a few miners' lunch pails, and cook pots eventually rolled downslope and collected around rock outcrops and old-growth trees. Those items are more dispersed, with some larger bottle parts such as bases mixed in. High-volume, light-weight artifacts tumbled farther down, collecting amid trees and more bedrock ledges. Typical among this third category are 5-gallon liquid cans, 1-gallon food cans, open-top tins, buckets, and tubs.

Over time, the scatter assumed its present size of 140' across and 160' downslope, ending amid a series of bedrock ledges forming a natural barrier. Nearly all materials are superficial. The scatter is not deep because extremely steep slopes provide a poor environment for accumulation. In fact, many items lie against rocks and trees and on top of duff, reflecting the fact that they have not remained where they were initially thrown, but continue to migrate down the hillside.

Casey Street Dump Interpretation

The dump is a community refuse repository typical of mining towns. Residents carried their household rubbish to open land immediately outside the neighborhood and threw it downslope, where it was out of sight. The residents made no effort to mitigate health hazards, nor were they concerned with property ownership. However, the dump was only occasionally used, resulting in a limited volume of materials.

The artifact assemblage hints at the neighborhood's socio-economic status and ethnic makeup. General, unadorned utilitarian artifacts are common, while decorative, fancy items are few. This suggests that the neighborhood was largely working-class. This supposition is supported by the presence of several miners' lunch pails. Sea-green beer and Gordon's gin bottle bases indicate that some of the residents were British.

Dateable artifacts confirm a timeframe spanning the 1870s through 1910s. Several food pails with lapped side-seams, and crude, applied, champagne bottle finishes date to the 1870s. Hand-finished bottle bases, hole-in-cap cans with lapped side-seams, and one-quart liquid cans with lapped side-seams date from the 1880s. Hole-in-cap cans with inner-rolled and soldered side-seams, a one-gallon hole-in-cap can with threaded cap, and a vent-hole meat can with lapped side-seam range from the 1890s through 1910. Machine-made bottle finishes with amethyst hues, sanitary cans with inner-rolled and soldered side-seams, and a domed kerosene can date to the 1910s.

Casey Street Dump Condition and Integrity

The dump initially might appear to be in fairly good condition, but closer examination reveals deficiencies. High-volume and light-weight artifacts regularly shift downslope from their origin points and now rest against trees and rocks. The downward migration has, essentially, sorted artifacts by size and shape, changing their original distribution. Bottle collectors have also picked through the area, removing whole bottles and artifacts of interest. No intact bottles or other well-preserved artifacts were observed. Otherwise, the land has seen little disturbance and no alternative use.

In its simplicity, the dump retains marginal integrity. Unplanned, used as needed, and organic in evolution, the dump never had a formal design. Without buildings, structures, or other constructs, the dump also had no materials or workmanship. The artifact assemblage is incomplete due to downward migration of objects and ongoing bottle collecting.

Casey Street Dump Significance

The Casey Street Dump does not contribute to the historic landscape. The dump is invisible because it is small in size, concealed by forest, and its artifacts are disbursed. In addition, its isolation on a steep slope at the street's end ensures few people will enter the site.

As an individual resource the dump is recommended ineligible for the NRHP and SRHP. In terms of Criterion A, the dump was relatively unimportant and cannot be directly tied to significant events and trends. The dump does not qualify under Criterion B because significant individuals were almost certainly not present on-site for a sustained time. In general, important people rarely frequented dumps. In terms of Criterion C, the site is not a particularly good example of its resource type, a community refuse dump, because it lacks cohesiveness and visual presence. The artifacts tend to be disbursed and nowhere form dense deposits. Further, the steep slope makes the site difficult to perceive. Regarding Criterion D, the site is unlikely to yield important information upon further study. The principal reason is that the dump is removed from the source and was used intermittently for at least three decades. Circa 1870s refuse is mixed with, and often indistinct from, circa 1910s materials. As a result, artifact concentrations and the artifacts themselves are impossible to tie to specific individuals, households, businesses, or narrow timeframes. The context necessary to decipher meaning from the materials is absent.

Casey Street Dump Management Recommendations

In terms of Section 106, the Land disposal will have no effect. The dump is non-contributing to both the landscape and NHL, and is recommended ineligible on its own. No further consideration is warranted.

The dump also has no heritage tourism potential, and no suggestions are offered.

Casey Street Dump Heritage Tourism Potential: None

The dump has no tourism potential.

Site 5GL.2199 Shelby Tunnel
Project: Land Disposal

The Shelby Tunnel is a marginally preserved archaeological example of a tunnel mine resource type. The tunnel was bored south-southwest from Chase Gulch's floor to intersect the Huddleston Vein at depth. The vein crosses northeast-southwest through Winnebago Hill. The tunnel is sited at the hill's northeast base at 8,350' elevation. Quartz Creek is approximately 40' to the north and supports a riparian habitat thick with young fir, aspens, box elder trees, and brush. Aspens have overtaken the site and preclude clear photography. The entire site is on a BLM tract.

Shelby Tunnel History

Archival research uncovered almost no information regarding the tunnel. The site is seen in circa 1890s photos, while a circa 1939 geological map names the tunnel as the Shelby and indicates that it connected with the neighboring Union Tunnel (5GL.2201) to the south. It is not known with certainty who drove the Shelby and when.

Shelby Tunnel Description

The site is presently a simple resource with a handful of archaeological features and artifacts. All buildings, structures, and equipment were removed long ago, leaving the tunnel portal, a blacksmith shop platform, and substantial waste rock dump.

Originally, the tunnel portal was solid and well-constructed. Miners blasted a trench from bedrock to expose a good vertical face and bored the tunnel underground into the trench's end. They also erected dry-laid rock walls to retain the sides and frame the portal. After the mine was abandoned, the tunnel itself completely collapsed and became a semicircular subsidence zone 33'x63' in area with headwall 18' high. The trench and walls, 6' wide, 5' high, and 24' long, are still preserved.

Using ore cars on a track, miners dumped waste rock northeast onto Chase Gulch's floor. Over time, they built up a pad (F2) 68'x98' in area and 10' thick, grading the top-surface flat. The dump is presently preserved but is becoming thickly overgrown with fir and ponderosa pine saplings.

The blacksmith shop was a frame building northwest of the tunnel. A subtle cut-and-fill platform (F3) 15'x16' in area is what remains, blanketed with erosional deposits, moss, and duff. The ground-coverage conceals most artifacts, but a piece of sheet iron, a few window glass fragments and fire bricks are visible.

The site possesses a sparse artifact assemblage of structural materials and industrial refuse distributed around the shop platform where activity was most intense. Structural materials are limited to a few cut and wire nails, pieces of sheet iron, and window glass fragments. Industrial refuse is limited to shop debris such as forge clinker and fire bricks at one time integrated into a forge. In combination, wire and cut nails, and amethyst bottle glass support a generalized date range spanning the 1870s-1910s.

Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto the ground and became scattered. Further, a deposition environment of steep slopes is not conducive to accumulation of materials.

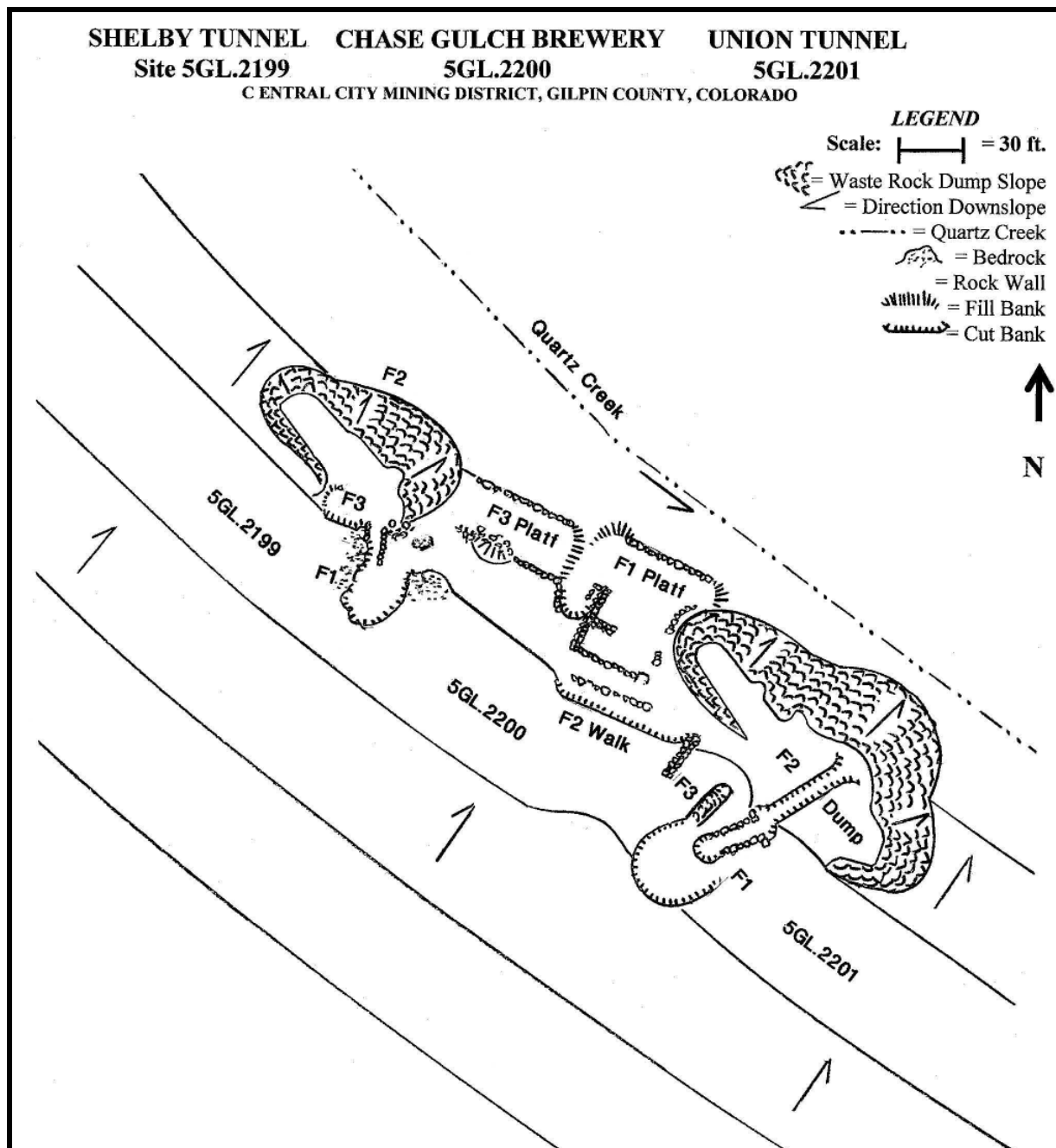


Figure 4.78: Plan view of Shelby Tunnel, 5GL.2199; Chase Gulch Brewery, 5GL.2200; and Union Tunnel, 5GL.2201.

Shelby Tunnel Interpretation

The Shelby was among the dozens of small, simple tunnel mines in the Central City district. Investors probably with the Huddleston Mine bored the tunnel to undercut the Huddleston Vein and work it from the bottom up. The Huddleston Mine was far to the southwest in Gregory Gulch. The Shelby was simple in that its facilities included a small blacksmith shop, track for ore cars, and possibly an ore bin, although the site lacks evidence of the latter. Miners

bored the tunnel by hand instead of with more efficient rockdrills. The hand work, simplicity, and lack of a substantial ore bin indicate that the mine was marginally productive at best, and not well-funded.

Shelby Tunnel Condition and Integrity

The resource is marginally preserved but visually prominent. The tunnel collapsed and became a semi-circular subsidence scar, although rock walls lining the access are intact. The waste rock dump, while thickly overgrown, retains original surfaces, profile, and footprint. The shop platform is difficult to perceive because it is concealed by overgrowth, a thick humus layer, and also due to erosion of its cut-banks.

The resource possesses marginal integrity on an archaeological level. The design of the surface plant is not readily interpretable because the shop platform is extremely faint, and other facilities such as an ore bin are no longer visible at all. Without buildings or structures, the site lacks integrity of materials and workmanship. But the site does offer some feeling and lies in a good setting.

Shelby Tunnel Significance

The site is significant as a contributing element of the landscape. The waste rock dump is visible from Chase Gulch Road and the Gilpin Tramway railroad grade to the northeast, and they add to the sense of mining in the gulch. The site is also obviously one in a series of deep tunnels along the gulch's southwest side.

On its own, the site is recommended ineligible because its integrity is insufficient. The existing archaeological features are too poorly preserved to convey the tunnel's importance as a gold producer under Criterion A, or the design and makeup of surface facilities in terms of Criterion C. The site also will not yield important information upon further study.

Shelby Tunnel Management Recommendations

Regarding Section 106, the site is significant as an element of the landscape, and it lies entirely on a BLM land tract. Disposal of the tract from federal to local government control adversely affects the landscape. Mitigation may be required.

The site has good potential as a stop on an interpretive trail. To prepare the site, the following is suggested:

- Detailed archival research. The information is useful for interpretation.
- Remove saplings from the waste rock dump and shop platform.
- Thin surrounding forest, selectively, to improve site's visual presence.
- Install simple name sign.

Shelby Tunnel Heritage Tourism Potential: High

The Shelby Tunnel has high potential because it is accessible from Chase Gulch Road, directly across Quartz Creek.

Name Signage can provide the site's name.

Interpretive Loop Trail. The southwest side of Chase Gulch provides a good opportunity for an interpretive loop trail. The route begins on Chase Gulch Road opposite the Centennial Tunnel and crosses the creek. The trail passes through the Centennial Tunnel (5GL.2206), Centre Tunnel (5GL.2207), Queen of the West Tunnel (5GL.2172), Shelby Tunnel (5GL.2199), Chase Gulch Brewery (5GL.2200), and Union Tunnel (5GL.2201). Each site would be interpreted.

Site 5GL.2200 Chase Gulch Brewery
Project: Land Disposal

At one time, the large frame building Chase Gulch Brewery building stood between the Shelby and Union tunnels (5GL.2199 and 5GL.2201) on Chase Gulch's south side. The brewery building was dismantled long ago, leaving an assemblage of rock walls and earthen platforms that are heavily overgrown with a thick box elder and fir forest. See Figure 7.78 above for a site map. The resource qualifies as an archaeological site, and nothing overtly conveys its function.

The platforms were graded on Winnebago Hill's northeast base, at 8,350' elevation on Quartz Creek's south side. Riparian habitat lines the creek, trees have choked the site itself, and doghair fir forest ascends south up the steep hillside. Almost the entire site is located on a BLM tract.

Chase Gulch Brewery History

Conrad B. Elliott came up with one of the better plans to get rich during the early 1860s rush to Gregory Diggings. Rather than mine gold, he established the Chase Gulch Brewery in 1862, as Black Hawk's first beer maker. Elliott built a two-story gabled-roof building in Chase Gulch for the plant, when placer miners were still at work almost on the doorstep. Elliott & Company specialized in British-style ales and stouts that he had perfected in St. Louis. In 1865, Elliott sold to Henry W. Hale and left for Idaho Springs. Hale & Alston then ran the brewery into 1869, tried selling, and dissolved the business. Without a buyer, the brewery permanently closed.⁵³

Chase Gulch Brewery Description

The brewery was a large frame building on adjoining platforms; the main portion southeast and a second portion northwest. The main portion was approximately 40'x40' in plan over a full-size cellar (F1) cut from the slope. Well-built rock walls outlined the footprint, retained the cellar's northwestern and southwestern cut-banks, and separated the interior into two rooms. A cut-and-fill platform approximately 50'x60' in area extended outward toward Quartz Creek, creating a yard. A dry-laid rock wall retained the platform's fill-bank. The platform has become totally overgrown with aspens and box elders and blanketed with duff, concealing small-scale features and most artifacts. The rock foundation is similarly blanketed, and while its

⁵³ Thomas, 2013:21.

southwest and northwest walls are intact, the other sides have partially collapsed.

The brewery's second portion stood on a distinct platform (F3) to the northwest. The platform was 24'x60' in area, graded with cut-and-fill methods, and defined by dry-laid rock walls 3' high. The building's actual footprint is unclear, although it was smaller than the platform. The surface is as crowded and smothered as its neighbor.

Little can be observed of the site's artifact assemblage. Thick humus and dense trees completely blanket the ground, concealing almost all materials.

Buried archaeological deposits and features are almost certainly present. Thin, superficial yard deposits can be expected on both platforms underneath the existing humus blanket. Deeper artifact deposits may exist in the cellar and along the downslope edges of both platforms. Privy pits could not be identified.

Chase Gulch Brewery Interpretation

Relatively little can be interpreted from the site without a meaningful artifact assemblage. Further investigations are necessary.

Chase Gulch Brewery Condition and Integrity

The resource is in fair condition on an archaeological level. All buildings, structures, and large objects were removed long ago, leaving the site's rock walls and platforms, which are well-defined. The site is, however, thickly overgrown by a dense aspen and box elder forest, burying the platforms and foundations with humus and deadfall. Any buried aspects are undisturbed.

The resource possesses mixed integrity on an archaeological level. The overall spatial design of the platforms and rock walls is apparent. But without buildings or structures, the site lacks evidence of design, materials, and workmanship of the brewery itself. The archaeological features are also too subtle to convey the feeling of a brewery ruin. The setting is good.

Chase Gulch Brewery Significance

The resource is recommended eligible on its own under NRHP Criterion D and SRHP Criterion E. Buried archaeological deposits will probably yield important information about early breweries on the Rocky Mountain mining frontier. Testing the platforms and their yard deposits could reinforce the site's timeframe, reveal information about early beer brewing, and define how the building was used after the brewery closed in 1869. When more is known about the site, it might qualify for significance under Criterion A.

The site is also significant as a contributing element of Chase Gulch's landscape. The robust rock walls and broad platforms are small-scale elements typical of early construction.

Chase Gulch Brewery Management Recommendations

The brewery site is recommended eligible on its own, and is a contributing element of the landscape. Because the site is on a BLM tract, its transfer from federal to local government is an adverse effect to the site. Mitigation may be required.

The site has heritage tourism potential, and several suggestions are offered:

- Intensive site documentation and archival research. Required for interpretation.
- Remove vegetation and saplings from each building platform. Use extreme caution to minimize disturbance. Requires supervision of monitor. Stumps to grade.
- Interpret with signage posted on proposed interpretive loop trail. Discuss early beer-making on the mining frontier.
- Conduct archaeological investigations.

Chase Gulch Brewery Heritage Tourism Potential: High

Interpretive Signage. The site provides a good opportunity for conveying the importance of breweries on the mining frontier. Discussion topics include what breweries were like, favored beer of the time, and how they were made.

Interpretive Loop Trail. The southwest side of Chase Gulch is a good route for an interpretive loop trail. See Shelby Tunnel above for description.

Public Archaeology. Conduct archaeological investigations and use event for publicity.

Site 5GL.2201 Union Tunnel
Project: Land Disposal

The Bonanza & Union Tunnel & Mining Company began boring the Union Tunnel in 1881 to develop a number of veins underneath Winnebago Hill. The company sited the tunnel on Chase Gulch's south floor a short distance east of the Shelby Tunnel (5GL.2199). See Figure 4.78 above for a site map. The Union extended southwest and intersected the Shelby underground. At one time, the Union featured a substantial tunnel portal, a tunnel house, large waste rock dump, compressed air main and ore car tracks. The main crossed north over the gulch floor to the associated Bonanza Tunnel (5GL.2213) where the compressor was located. The site is presently an archaeological example of a tunnel mine, and is limited to the tunnel, dump, and a rock wall belonging to the tunnel house. Quartz Creek flows past the site's north side, and Winnebago Hill rises to the south. The site's north half has been overtaken by riparian habitat and the south half by doghair fir and ponderosa pine forest. Elevation is 8,350', and the waste rock dump's southeastern lobe rests on a BLM tract.

Union Tunnel History

Theodore H. Becker was among the founders of the Gilpin County mining industry. He arrived with the Gregory gold rush of 1859, weathered the deep depression of the late 1860s, and later bought up a number of claims in the district when they were offered for a pittance. Some of his properties were scattered on Maryland Mountain and Winnebago and Bates hills. During the late 1870s, he was struck with the idea of undercutting them with several deep tunnels and working the veins from the bottom up. Becker contacted Denver investor George H. Danforth, who was able to interest New York City capitalists in the scheme. Becker and Danforth

formalized the effort as the Bonanza & Union Tunnel & Mining Company in 1879, planning to bore the Bonanza Tunnel into Maryland and the Union into Winnebago.⁵⁴



Figure 4.79: The 1890s photograph is a westerly view of Chase Gulch. The Union Tunnel is at center, the Bonanza Mill is at right, and the Aetna Tunnel is at left. Source: Denver Public Library.

Becker and Danforth needed the New York investors because the project was capital-intensive and would consume substantial time and money before generating any income. The partners spent a year and a half planning and raising more money, and then began driving the tunnels. At first, miners worked by hand, laboriously pushing the Bonanza Tunnel to a length of 400' by mid-1881. Progress was slow, so Becker installed an air compressor at the Bonanza and used rockdrills to speed the rate to riches in both tunnels. The following year, the tunnels began yielding a significant volume of ore, with the Bonanza reaching 1,000' long and the Union 600'.⁵⁵

Becker pushed the tunnels onward and maintained production through 1883. By 1884, the Bonanza was 1,200' and the Union 750', and Becker claimed that together they pierced two-thirds of the Central City district's ground, exposing numerous veins for an endlessly profitable

⁵⁴ *Colorado Mining Directory*, 1883:264; *Rocky Mountain News* 10/10/81 p3 c1.

⁵⁵ *Colorado Mining Directory*, 1883:264; *Rocky Mountain News* 7/28/81 p4 c5; *Rocky Mountain News* 10/10/81 p3 c1.

venture. Or so he promoted the operation on a visit to London. But miners had quickly stripped out the richest ore, leaving low-grade material that required on-site concentration to be profitable. As a result, production dropped off and the investors grew dissatisfied. Becker resolved the problem by squeezing a little more capital from them for a concentration mill. The money came slowly, delaying the mill's completion until early 1886. By that time, the company had exhausted the available ore, and Becker petitioned for yet a little more money for further development along the veins. Having reached their limit, the investors denied the request, and Becker was forced to suspend work. The Union Tunnel never reopened, but the Bonanza went on to become one of Black Hawk's more important operations years later.⁵⁶

Union Tunnel Description

Historically, the Union Tunnel was bored southwest to undercut veins deep within Winnebago Hill. Miners dug a substantial trench (F1) through soil to expose bedrock for the portal, and lined the sides with well-made rock walls. At some point, the tunnel's bedrock crown imploded and became a semicircular scar 36'x40' in area with headwall 25' high. Remnants of the walls still retain the access trench, which is currently choked with aspen saplings.

Using ore cars on a track, the miners dumped waste rock at the trench mouth, over time creating a pad (F2) with a northwestern lobe measuring 88'x172' in area and 10' thick. Miners graded the top-surface flat while maintaining a ditch through its center for drainage. Aspens have taken hold on the dump's western portion.

The tunnel house adjoined the tunnel portal's north side. When intact, the building was approximately 27'x45' in area with rock walls, a frame façade, and rafter roof. Inside were a blacksmith shop, timber dressing station, and stable for a draft animal. The structural materials were dismantled long ago, the rock walls imploded, and tunnel collapse filled the interior with earth and rubble. The building's footprint and platform are unidentifiable except for the top of what had been the northwest wall (F3), which extends out of the ground.

The site possesses a sparse artifact assemblage of structural materials and industrial refuse scattered on the dump. Structural materials are limited to a few cut nails, pieces of sheet iron, and stovepipe, while industrial artifacts are blacksmithing refuse such as forge clinker. The nails reflect an age range spanning the 1870s and 1880s.

It is unlikely that the site harbors archaeological deposits because activity tended not to generate material in volume, which was thrown out on to the ground. Further, the deposition environment of steep slopes is not conducive to the accumulation of buried deposits.

Union Tunnel Interpretation

Despite its length, heavy production, and importance, today's site is disappointingly impoverished with little to offer. The massive waste rock dump confirms that the tunnel was long, and lack of substantial foundations confirms that the compressors and boilers used in the operation were at the Bonanza Tunnel, opposite side of Chase Gulch. Where the company kept the ore the tunnel yielded is uncertain, because there is no evidence of large ore bins at the site. Little more can be observed without a better feature assemblage and more artifacts.

⁵⁶ "Mining News" *EMJ* 2/7/85 p93; "Mining News" *EMJ* 8/4/88 p90; *Report of the Director of the Mint*, 1884:213; *Rocky Mountain News* 10/25/84 p8 c1; *Rocky Mountain News* 9/30/85 p3 c3.

Union Tunnel Condition and Integrity

The resource is poorly preserved overall. The tunnel collapsed and became a massive subsidence area retaining no original form. The dump possesses its original surfaces, profile, and footprint, with the western half now overwhelmed by thick brush, Gambel oak, aspens, and fir saplings. Slope failure, collapse, in-fill, and vegetation erased evidence of the shop and any other surface facilities. Even so, from afar the site is obviously a tunnel mine.

The resource possesses marginal integrity. Without buildings, structures, or identifiable archaeological features, the site no longer conveys design, materials, workmanship, or association. But the large dump in a mining landscape does convey some feeling.

Union Tunnel Significance

The site is significant as a contributing element of the landscape. The waste rock dump is visible from Chase Gulch Road and the Gilpin Tramway railroad grade to the northeast, and it adds to the sense of mining in the gulch. The site is also obviously one in a series of deep tunnels on the gulch's southwest side.

On its own, the site is recommended ineligible because integrity is insufficient. The existing archaeological features are too poorly preserved to convey the tunnel's importance as a gold producer under Criterion A, or the design and makeup of surface facilities in terms of Criterion C. The site also will not yield important information upon further study.

Union Tunnel Management Recommendations

Regarding Section 106, the site is significant as an element of the landscape, and it lies entirely on a BLM land tract. Disposal of the tract from federal to local government control adversely affects the site. Mitigation may be required.

The site has good potential as a stop on an interpretive trail. To prepare the site, the following is suggested:

- Detailed archival research. Such information is necessary for interpretation.
- Remove saplings from the waste rock dump and shop platform.
- Thin surrounding forest, selectively, to improve site's visual presence.
- Interpret site.

Union Tunnel Heritage Tourism Potential: High

The Union Tunnel has high potential because it is accessible from Chase Gulch Road, directly across Quartz Creek.

Interpret Site: Signage or other media can provide the site's history and tie it to the Bonanza across the gulch.

Interpretive Loop Trail. The southwest side of Chase Gulch provides a good opportunity for an interpretive loop trail. See the Shelby Tunnel above for a description.

Site 5GL.2202 Black Quartz Mine
Project: Basic Inventory

In 1864, prospectors dug a cluster of pits in search of the Black Quartz Vein, and when found, sank a shaft approximately 120' deep to develop it. The prospectors mined a little ore northeast and southwest along the vein and then quit, without completing surface improvements. The resource described here is limited to the shaft and its dump, which is a component of the historic landscape. Buildings, structures, or their archaeological features are absent.

Black Quartz Mine Description

The shaft collapsed and became a subsidence crater 26'x36' in area and 5' deep, drawing in surrounding ground and any associated features. The dump is a fan 35'x48' in area and 3' thick, with original surfaces, profile, and footprint. The Winnebago Hill Haul Road (5GL.2170.1) was graded between the shaft and dump. The site lacks artifacts and buried archaeological deposits.

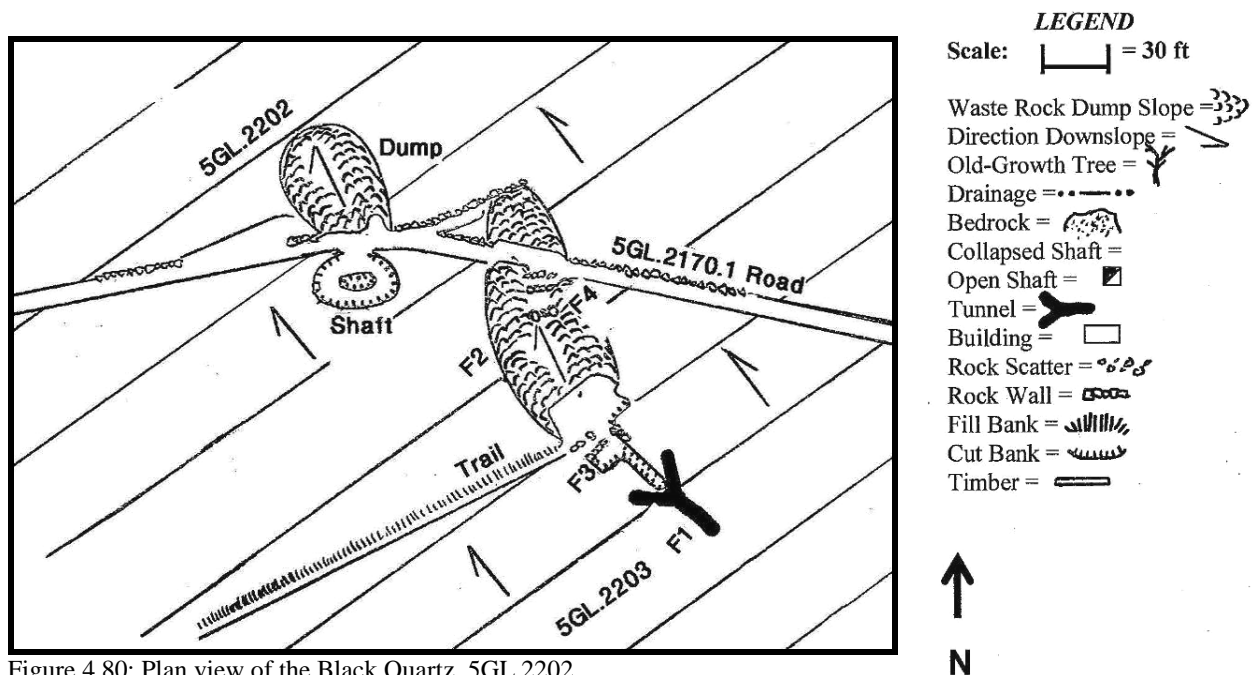


Figure 4.80: Plan view of the Black Quartz, 5GL.2202.

Black Quartz Mine Condition and Integrity

The resource is in poor condition because its shaft collapsed and drew in surrounding ground where small-scales features had been located. Fir saplings then crowded out much of the area. The waste rock dump is, however, preserved with original surfaces, profile, and footprint. The resource possesses little integrity. Without buildings, structures, or archaeological features, design, materials, and workmanship are no longer apparent. The resource also has little feeling because it lacks a good feature assemblage.

Black Quartz Mine Significance

The dump is among a cluster of other small mines on Winnebago Hill's north slope, and that cluster is visible from vantage points west and north. As such, the dump is a contributing element of Chase Gulch's landscape.

Black Quartz Mine Management Recommendations

No action recommended.

Black Quartz Mine Heritage Tourism Potential: Low

The site's primary value is as a contributing element of the landscape, adding to the feeling of mining.

Site 5GL.2203 *Centre Mine: Midlevel Tunnel* **Project: *Basic Inventory***

Circa 1870, prospectors discovered the rich gold-bearing Centre Vein system on Winnebago Hill's north slope. They determined that the vein trended northeast-southwest like its neighbors, and developed it through midlevel and upper tunnel (Sites 5GL.2203 and 5GL.2204). A mining outfit then undercut the system with the Centre Tunnel (5GL.2207), sited in Chase Gulch at Winnebago Hill's north base.

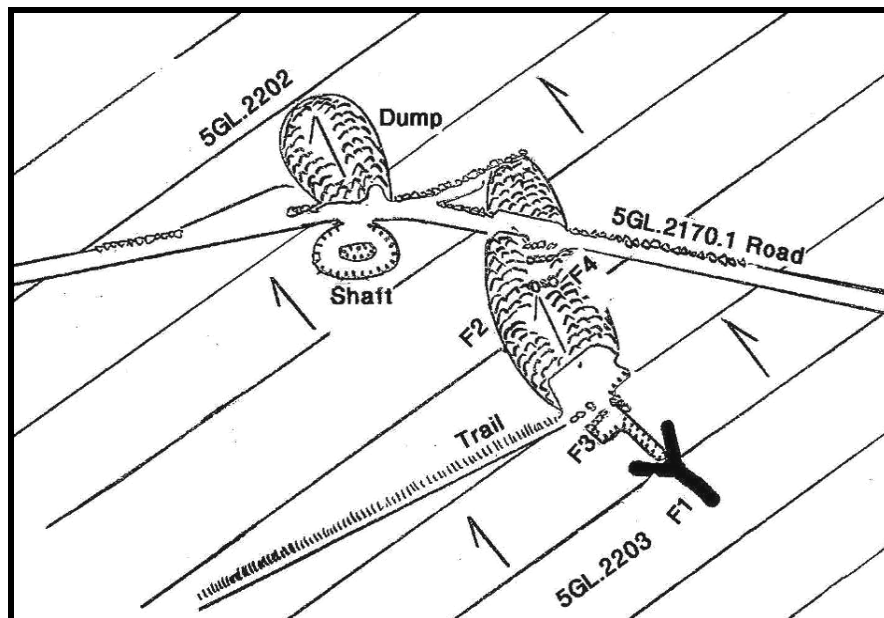


Figure 4.81: Plan view of Center Mine: Midlevel Tunnel, 5GL.2203.

Centre Mine: Midlevel Tunnel Description

The midlevel tunnel is an archaeological site both individually eligible and contributing to Chase Gulch's landscape. Miners bored the tunnel (F1) southeast as a crosscut to intersect several veins trending northeast-southwest through the Centre group of claims. They dumped waste rock downslope from the tunnel using ore cars, forming a fan (F2) of material. Surface facilities were simple, with a blacksmith shop (F3) inside the tunnel portal being the only building. For the shop, miners incised a chamber 10'x11' in plan into the tunnel portal's southwest side, erected a dry-laid rock wall as a façade, and roofed it. A track for ore cars extended out of the tunnel, through the small shop, and onto the dump. The original operation was short-lived. Decades later, during the Great Depression, a party of miners reopened the tunnel, rehabilitated the shop with a corrugated iron roof, and constructed a flat-bottom ore bin (F4) along a wagon road at the waste rock dump's toe. Archaeological features representing these facilities remain.

The tunnel has since collapsed and is now a distinct linear subsidence 7' wide and 36' long choked with mossy boulders. The shop chamber is largely intact, although the roof has collapsed and the rim has crumbled. The façade still stands and a dry-laid rock forge is visible underneath debris in the west corner. Shop refuse including the tuyere (air pipe for the forge) lies scattered on the dump. The ore bin is gone, but its foundation of two rock walls is embedded in the dump beside the road. The foundation is 9'x12' in plan and the lower wall is 2' high and the upper 3' high. A broken shovel used to scoop ore into a parked wagon remains on the foundation's flat platform, where the bin floor was.

The site possesses a sparse but complete artifact assemblage. Structural materials lie around the shop ruin. Industrial refuse including a forge hood, the tuyere, forged iron scraps, and pipe fittings are scattered around the shop and on the dump. Dateable artifacts reflect two time periods. Cut nails, an applied bottle finish, and a hole-in-cap can with lapped side-seam date to the 1870s. Wire nails, salvaged lumber, salvaged hardware, a sanitary can, and the shovel reflect the 1930s.

Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto the ground. Further, the steep deposition environment is not conducive to the accumulation of buried deposits.

Centre Mine: Midlevel Tunnel Condition and Integrity

The resource's condition is well preserved on an archaeological level. The tunnel collapsed and is closed, but the portal and recessed shop with rock façade are intact. The shop is missing its roof and the walls have slumped somewhat. The forge within is evident. The dump retains its original surfaces, profile, and footprint, although the top is becoming overgrown with fir saplings. The ore bin was dismantled, but its foundation is still distinct.

The resource possesses sound integrity on an archaeological level. In combination, the tunnel, recessed shop, dump, and ore bin foundation convey the general design of surface facilities. Although the shop features its rock façade and roof ruins, this is insufficient for integrity of materials and workmanship. Because of its location in an outstanding setting surrounded by other prospects, the resource has integrity of feeling and association.

Centre Mine: Midlevel Tunnel Significance

The site is both a contributing element of the landscape and potentially eligible for the NRHP and SRHP on its own. Although small, the waste rock dump is one in a concentration of similar mines on Winnebago Hill's north slope, and the concentration is visible from vantage points north and west.

The site is potentially eligible under NRHP and SRHP Criteria A and C in the area of industry. The mine was among the earliest developed in Chase Gulch, and is a good archaeological example of its resource type.

Centre Mine: Midlevel Tunnel Management Recommendations

- Intensive documentation, including official significance evaluation. Necessary for heritage interpretation.
- Thin vegetation on dump, in front of tunnel portal, and around blacksmith shop ruin. Stumps to grade.
- Clean out and stabilize shop ruin. Rebuild rock wall and forge if possible (under supervision of monitor).
- Interpret with signage. Discuss history of site and relationship to greater Centre Vein system. Identify the surface facilities and how the mine operated.
- Develop access trail from Winnebago Hill Wagon Road below.

Centre Mine: Midlevel Tunnel Heritage Tourism Potential: High

Interpret Site. Although presently difficult to access, the site should be interpreted because of its importance and education potential. Signage would explain the site's history, operations, and 1870s mining methods.

Interpretive Loop Trail. The site can be a point on a loop trail starting at the dam. The trail would ascend Winnebago Hill Haul Road (5GL.2170.1) to another wagon road on Winnebago Hill's east crest. The trail turns west (right) onto the wagon road and contours west to the Centre Mine Upper Tunnel (5GL.2204), an interpretive stop. The road continues west to the Ranney Mine (5GL.2205). The trail could descend a branch haul road (5GL.2170.2) back to start.

Site 5GL.2204 Centre Mine: Upper Tunnel ***Project: Basic Inventory***

The Centre Mine's upper tunnel is a simple archaeological site which is both individually eligible and contributes to Chase Gulch's landscape. All buildings, structures, and equipment were removed long ago, leaving an assemblage of archaeological features.

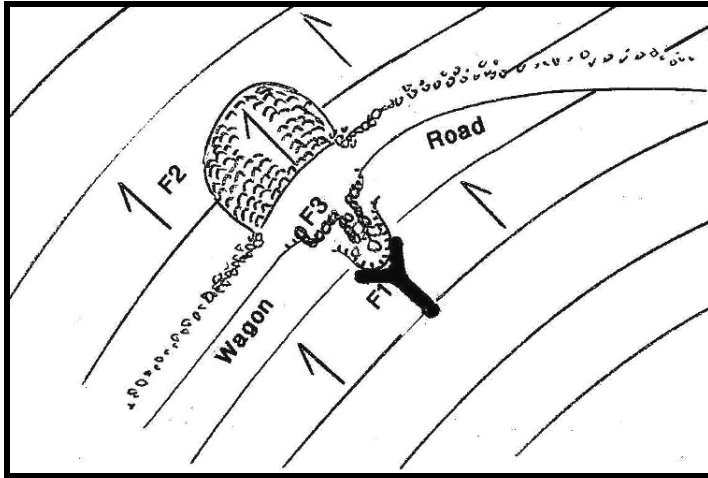


Figure 4.82: Plan view of Center Mine: Upper Tunnel, 5GL.2204.

Centre Mine: Upper Tunnel Description

Prospectors bored the tunnel (F1) southeast as a crosscut to intersect and sample several veins on the Centre group of claims. They first blasted out a trench 4' wide and 20' long, lining its sides with dry-laid rock walls 6' high. The tunnel later collapsed and became a subsidence zone 22'x27' in area, but the portal and rock walls still remain intact.

Using an ore car, the prospectors dumped waste rock downslope, building up a bench of material (F2) 40'x48' in area and 4' thick. They graded the top-surface flat for workspace. Fir saplings now grow on the dump and their duff blankets the ground, concealing artifacts. The dump still possesses its historic surfaces, profile, and footprint.

The surface facilities were simple, limited to a small blacksmith shop in a frame tunnel house. The building stood at the tunnel portal on a platform (F3) cut from the slope. The prospectors erected a well-made rock wall to retain the cut-bank and serve as the southeast wall, and built the other walls with lumber. The tunnel house was 7'x20' in plan, with the shop in the southwest end and the tunnel portal in the northeast end. Presently, the platform and rock wall outline the building's footprint. The wall is 5' high and missing its brow, and duff blankets the ground.

The site has a sparse artifact assemblage of structural materials and industrial refuse scattered on the dump. Industrial artifacts consist of blacksmithing refuse, while structural materials are limited to cut nails, window glass, and several sheet iron pieces. More artifacts are present but concealed by duff. The nails reflect an age range spanning the 1870s. Buried archaeological deposits are absent because activity tended not to generate material in volume, which was thrown out onto the ground. Further, the steep and rocky deposition environment is not conducive to the accumulation of buried deposits.

Centre Mine: Upper Tunnel Condition and Integrity

In condition, the resource is fairly well preserved on an archaeological level. Although the tunnel has collapsed, the rock walls defining the portal are mostly intact. The waste rock dump retains all its original surfaces, footprint, and profile, and the shop platform and rock wall are intact. The site is, however, overwhelmed with fir saplings concealing most features from

clear view.

The resource possesses integrity on an archaeological level. Combined, the tunnel portal, shop platform, and rock walls convey general design of the surface facilities, however simple they were. The design and content is typical of short-lived prospect operations. Without intact buildings or structures, the site has no integrity of materials and workmanship. Undisturbed in deep forest and surrounded by prospects, the site does possess feeling and association.

Centre Mine: Upper Tunnel Significance

The site is both a contributing element of the landscape and potentially eligible for the NRHP and SRHP. Although small, the waste rock dump is one in a concentration of similar mines on Winnebago Hill's north slope, which is visible from vantage points north and west.

The site is potentially eligible under NRHP and SRHP Criteria A and C in the area of industry. The mine was among the earliest developed in Chase Gulch, and is a good archaeological example of its resource type.

Centre Mine: Upper Tunnel Management Recommendations

- Intensive documentation, including official significance evaluation. Necessary for heritage interpretation.
- Thin vegetation on dump, in front of tunnel portal, and around tunnel house ruin. Stumps to grade.
- Interpret with signage. Topics include history of site and relationship to greater Centre Vein system; identifying the surface facilities; and how the mine operated.

Centre Mine: Upper Tunnel Heritage Tourism Potential: **High**

Interpretive Signage. The site should be interpreted because of its importance and education potential. Signage could explain the site's history and operations. The location of the dump has excellent views of Chase Gulch.

Interpretive Loop Trail. The site can be a point on an interpretive loop trail. See the Centre Mine Midlevel Tunnel (5GL.2204) above for a description.

Site 5GL.2205 Ranney Mine **Project: Basic Inventory**

In 1864, prospectors dug a cluster of pits and trenches in search of a gold vein and then sank a shaft on it when discovered. They extracted ore from within the shaft, the underground workings taking form as a narrow, linear stope. David D. Belden purchased the property during the early 1870s, undercut the vein with his Belden Tunnel (5GL.7.12) in 1875, and worked it from the bottom up. The Ranney site presently features the stope and a sampling of surrounding pits. Other pits and trenches extend southwest and northeast but were not included. All buildings, structures, and equipment were removed long ago.

Ranney Mine Description

The pits are typical probes intended to expose bedrock in hopes of revealing a vein. The smallest (F5) is a trench 4' wide, 10' long, and 5' deep in bedrock. The prospectors shoveled waste rock downslope. The largest (F6) is 12'x16' in area and 6' deep. The prospectors also bored a short adit (F4) designed to intersect the vein below the surface. They first cut a trench 5' wide and 10' long, and then continued a short distance underground. The adit is now mostly collapsed.

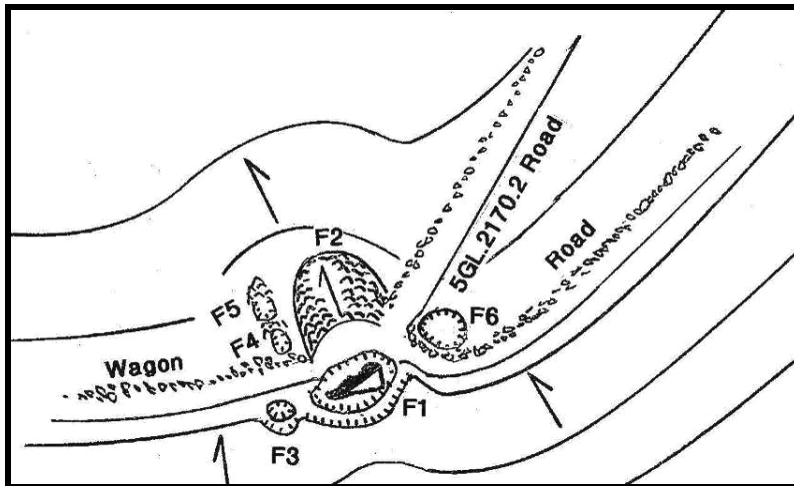


Figure 4.83: Plan view of Ranney Mine, 5GL.2205.

The shaft (F1) began as a shallow probe on the vein equipped with no more than a hand windlass as a hoist. The prospectors mined ore southwest and northeast along the vein, creating a linear chamber no more than 100' deep. The shaft collar later collapsed and created a funnel 24'x38' in area. The stope becomes apparent around 14' down, manifesting as a ragged fissure 5' wide, 18' long, and 12' deep with collapsed passages southwest and northeast. The collapse drew in the waste rock dump's top-surface where small-scale features may have been located. The dump (F2) is a pad 40'x46' in area and 4' thick. The site was also an intersection of several wagon roads that cross the dump's top-surface,

The site possesses a handful of artifacts on the shaft's waste rock dump. The items are limited to a few cut nails and pieces of forge clinker, the nails reflecting an age range spanning the 1860s-1870s. Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto the ground. Further, the deposition environment of steep slopes and thin soil is not conducive to the accumulation of buried deposits.

Ranney Mine Condition and Integrity

The resource's condition is mixed. The pits and roads are well-preserved but the stope collapsed and drew in the waste rock dump's top-surface, destroying any small-scale features that might have been present. The site is also heavily overgrown with a young, thick fir forest. The dump's footprint and profile are unchanged.

The resource possesses marginal integrity. In a broad sense, the pits and shaft reflect the general pattern that the prospectors employed to find and sample the vein. But, design of the shaft itself and associated surface facilities is no longer apparent due to collapse. Without

buildings and structures, the site has no integrity of materials and workmanship. Located in deep forest and surrounded by other pits and trenches, the site has feeling and association of prospecting.

Ranney Mine Significance

The site's primary value is as a contributing element of Chase Gulch's historic landscape. The dump is among a cluster of other small mines on Winnebago Hill's north slope, visible from vantage points west and north.

Ranney Mine Management Recommendations

- Close hazardous slope in cooperation with DRMS (may provide funding).
- Thin saplings on dump, stumps to grade. Sapling removal will allow road to be used as trail.
- Interpret with signage. The site's exploratory pits illustrate methods that prospectors used to find and track gold veins.

Ranney Mine Heritage Tourism Potential: Medium

Interpretive Loop Trail. The site can be a point on a loop trail involving Winnebago Hill Haul Road (5GL.2170.1). See Centre Midlevel Tunnel (5GL.2203) above for description.

Interpret Site. If the trail is developed, the site would be a natural interpretive stop. The site is, however, not important enough to be a destination in itself.

Site 5GL.2206 Centennial Tunnel ***Project: Basic Inventory***

In 1875, prospectors discovered the Centennial Vein system extending northeast-southwest through Winnebago Hill, developing it through the First Centennial Shaft (Site 5GL.300). In 1876, Central City investors organized the Centennial Tunnel Mining Company and undercut the vein with the Centennial Tunnel. They sited the bore on Chase Gulch's south floor, pushing the tunnel southwest along the vein. When operating, the mine had a simple surface plant including a tunnel house, track for ore cars, and an ore bin. Original Chase Gulch Road passed by the tunnel house and ore bin, providing wagon service. All buildings, structures, and equipment were removed long ago, leaving the site as a good archaeological example of its resource type, a tunnel mine.

Centennial Tunnel Description

Historically, miners bored the tunnel through soil and into bedrock, at the very base of Winnebago Hill. They installed timbering and erected well-built dry-laid rock walls to support

the portal, which eventually collapsed. The tunnel is now a linear subsidence zone (F1) choked with brush and trees, and difficult to identify from a distance.

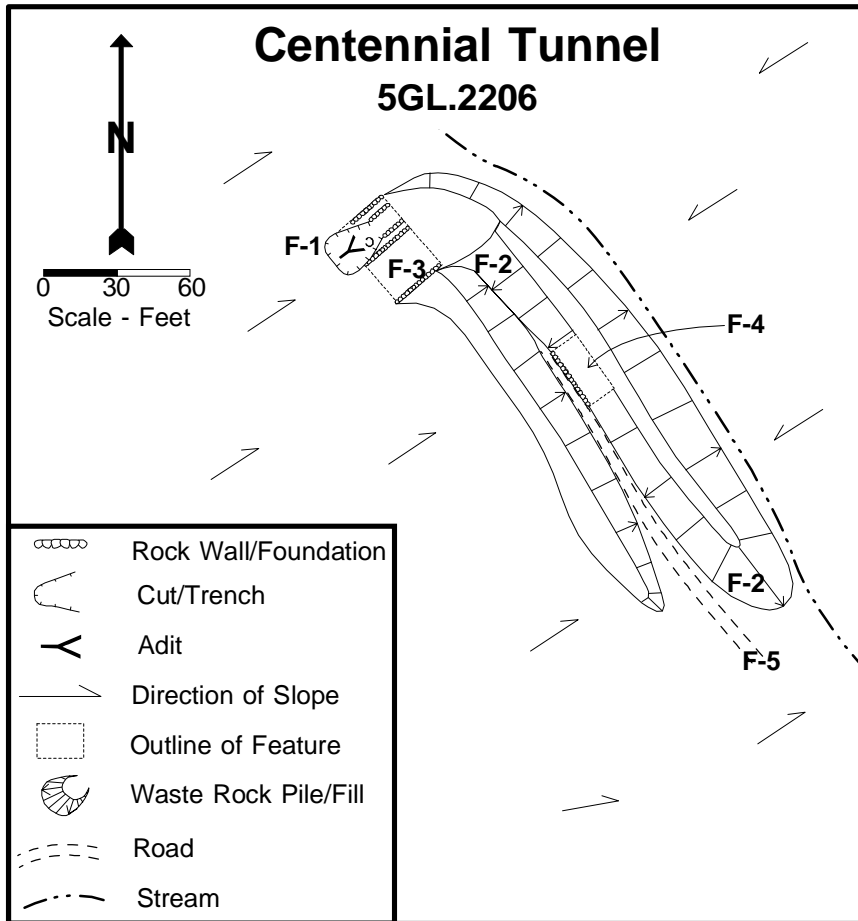


Figure 4.84: Plan view of Centennial Tunnel, 5GL.2206.

As was common, miners used ore cars to dump waste rock generated underground. They extended tracks along both sides of the road passing through the site and ejected the material, creating two elongated lobes (F2). The northern became 38' wide and 222' long and the southern 22' wide and 161' long. At one time, dry-laid rock walls retained the rock off the road, but these have mostly collapsed. The road now manifests as a depressed slot between the lobes. The dump is a landmark visible from present-day Chase Gulch Road.

A tunnel house (F3) enclosed the tunnel portal and a blacksmith shop in separate rooms. In design and construction, the building was similar to other Cornish-influenced mine buildings in Gilpin County. The tunnel house was 24'x38' in plan with a shed roofline, oriented northwest-southeast, and recessed into the slope. All walls except for the northeast were rock masonry 18" thick and 8' high mortared with mud. The northeast wall was a frame façade. The tunnel room was 18'x24' in plan with a slot 8' wide leading into the tunnel, while the shop was 20'x24' in plan. Though the rock walls still stand, all woodwork was removed decades ago, the shop's cut-bank partially slumped over time, and vegetation took hold. Soil and duff then blanketed the interior, concealing small-scale features and artifacts. Important buried features and artifacts are likely.

The surface plant included an ore bin for storing payrock between wagon shipments. When intact, the structure was a combination sloped-floor and flat-bottom type 12' wide and 26' long nestled into the waste rock dump, on the road's north edge. Nearly all structural materials are gone, but a platform (F4) 8' wide and 27' long surrounded by sloped sides remains. A rock wall 2' high retains the platform off the road.

The site has an impoverished artifact assemblage. Blacksmithing refuse and structural materials such as lumber pieces, crude bricks, cut nails, and sheet iron are distributed around the tunnel house ruin and ore bin platform. Cut nails and the bricks reflect an age range spanning the 1870s.

Buried archaeological deposits and features are likely in the tunnel house ruin. Wall-fall, duff, and soil creep probably buried artifacts and small-scale features such as shop appliance foundations and possibly an ore sorting station. In general, early shop and ore sorting features are uncommon and important to the understanding of 1870s mining operations.

Centennial Tunnel Condition and Integrity

In condition, the Centennial Tunnel is fairly well preserved on an archaeological level. The tunnel house ruin, the walls retaining the tunnel portal, and ore bin foundation are distinct upon close examination but concealed from afar by dense brush and young trees. The waste rock dump, visible from Chase Gulch Road, still possesses its original surfaces, profile, and footprint. The tunnel itself has completely collapsed and is difficult to distinguish. Nearly all the site's structural materials and large artifacts were removed long ago.

The resource possesses good integrity on an archaeological level. The archaeological features convey the overall surface plant design, but are insufficient for integrity of individual facility design, materials, or workmanship. The site has good integrity of feeling and association, and lies in an intact setting.

Centennial Tunnel Significance

The Centennial Tunnel is both an important and prominent element of the landscape, and potentially eligible for the NRHP and SRHP. In terms of landscape, the waste rock dump is a landmark adjacent to Chase Gulch Road, complimenting other mines in the area. The dump is visible from the road, as well as vantage points above and east on the Gilpin Tramway grade. The site could be eligible for the NRHP and SRHP under Criteria A and C in the area of Industry. The mine was a noteworthy gold producer, and is presently a good archaeological example of its resource type. The resource can also be eligible for NRHP Criterion D and SRHP Criterion E for the shop ruin's archaeological potential.

Centennial Tunnel Management Recommendations

- Intensive documentation and archival research. Includes formal significance evaluation. Necessary for heritage interpretation.
- Thin saplings on dump's west end, around tunnel portal, and in tunnel house platform. Stumps to grade.
- Interpret with signage. Topics include mine history, relationship to Centennial Vein, how mine operated, and Cornish influence on rock masonry mine buildings.

- Clean out tunnel house ruin. Repair rock walls if possible.
- Enhance road/channel through dump by cleaning out some waste rock. Rebuild sections of rock walls.

Centennial Tunnel Heritage Tourism Potential: High

The Centennial Tunnel has high potential. The mine was historically important, its archaeological features are easily interpreted, and the site is accessible from Chase Gulch Road, directly across Quartz Creek.

Interpretive Signage can explain the site's history, relationship to the Centennial Vein, and influence of Cornish design and workmanship on the tunnel house.

Interpretive Loop Trail. The southwest side of Chase Gulch provides a good opportunity for an interpretive loop trail. The route begins on Chase Gulch Road opposite the Centennial Tunnel and crosses the creek. The trail passes through the Centennial Tunnel (5GL.2206), Centre Tunnel (5GL.2207), Queen of the West Tunnel (5GL.2172), Shelby Tunnel (5GL.2199), Chase Gulch Brewery (5GL.2200), and Union Tunnel (5GL.2201). Each site would be interpreted.

Site 5GL.2207 Centre Tunnel
Project: Basic Inventory

Circa 1870, prospectors discovered the rich, gold-bearing Centre Vein system on Winnebago Hill's north slope. They initially developed the vein through several upper tunnels (Sites 5GL.2203 and 5GL.2204), finding that it trended northeast-southwest like its neighbors. A mining outfit then undercut the system with the Centre Tunnel, sited in Chase Gulch at Winnebago Hill's north base. The Centennial Tunnel (Site 5GL.2206) was adjacent and northwest and the Queen of the West Tunnel (5GL.2172) was adjacent and southeast.

Intended as a haulage way for ore production, the Centre was a relatively simple operation limited to the tunnel, its dump, a tunnel house, and an ore bin. All buildings, structures, and equipment were removed long ago, leaving today's simple assemblage of archaeological features.

Centre Tunnel Description

The tunnel (F1) is open, well-preserved, 4'x6' in-the-clear, and grated closed by DRMS in 1988. The portal is at the end of a trench 5' wide and 18' long blasted from bedrock. Historically, the tunnel house enclosed the tunnel portal, a blacksmith shop, and ventilation blower. Half frame and half rock masonry, the building was 14'x21' in plan, oriented northwest-southeast, and divided into two rooms. The southwest and southeast walls were rock masonry while the other walls were frame construction. The shop and blower were in the southeast room and the tunnel portal was in the northwest room. All structural materials were removed decades ago, leaving partial rock walls and a cut-and-fill platform (F3) blanketed with rubble and duff. A few anchor

bolts remain from the blower. A storage platform (F4) 7'x9' in area retained with a rock wall extends southeast.

The waste rock dump (F2) is 50'x62' in area and 15' thick with top-surface graded flat. The dump retains its historic footprint, profile, and surfaces, and is a landmark on the gulch floor.

The site possesses an austere artifact assemblage of structural materials and industrial refuse. In particular, a few pieces of lumber, cut and wire nails, and several 5-gallon cans are distributed around the tunnel house platform. The nails reflect an age range spanning the 1870s-1910s.

Buried archaeological features and artifacts are likely underneath the duff and rubble blanketing the tunnel house platform. Buried features probably include additional anchor bolts and footers for the blower and forge.

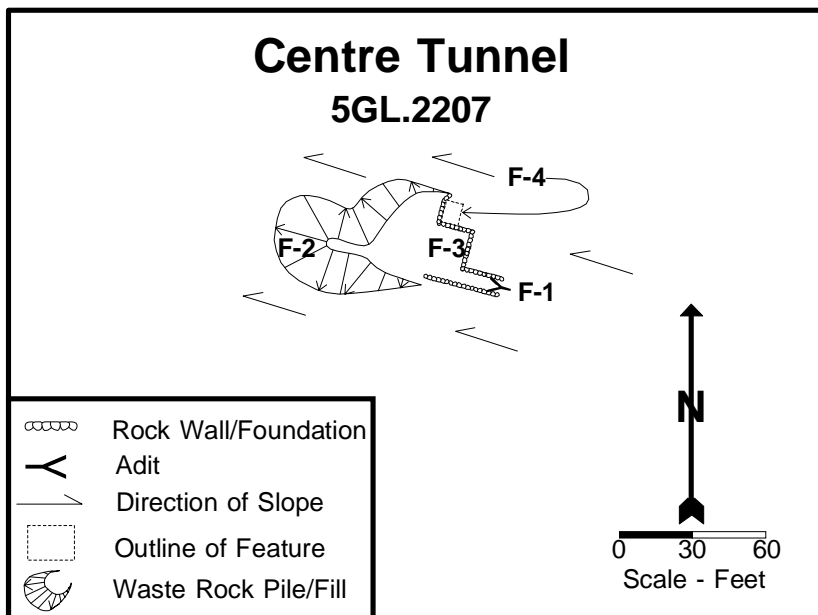


Figure 4.85: Plan view of Centre Tunnel, 5GL.2207.

Centre Tunnel Condition and Integrity

In condition, the resource is fairly well preserved on an archaeological level, its individual features clearly definable and conveying the surface facilities. The tunnel portal is intact, the tunnel house perimeter is evident, and the dump possesses its original surfaces, footprint, and profile. Young evergreen saplings are gradually overtaking the surface plant area. Evidence of the mine's ore bin is missing.

The resource possesses fair integrity on an archaeological level. The tunnel portal, dump, and tunnel house platform reflect design of most of the mine's surface facilities. Integrity of design is, however, incomplete without evidence of the ore bin. The site has feeling and association, and is in an intact setting evocative of mining in the area.

Centre Tunnel Significance

The Centre Tunnel is both a contributing element of the landscape and potentially eligible for the NRHP and SRHP. Regarding the landscape, the dump is visible from vantage points on Chase Gulch Road and compliments the dumps associated with neighboring mines. In terms of eligibility, the site could qualify under NRHP and SRHP Criteria A and C in the area of Industry. The Centre was an important gold producer and is a good archaeological example of its resource type, a tunnel mine.

Centre Tunnel Management Recommendations

- Intensive documentation and archival research. Includes formal significance evaluation. Necessary for heritage interpretation.
- Thin saplings on dump's west end, around tunnel portal, and in tunnel house platform. Stumps to grade.
- Interpret with signage. Topics include mine history, relationship to Centre Vein system, and how mine operated.
- Clean out tunnel house ruin. Repair rock walls if possible.

Centre Tunnel Heritage Tourism Potential: High

The Centre Tunnel has high potential. The mine was historically important, its archaeological features are easily interpreted, and the site is accessible from Chase Gulch Road, directly across Quartz Creek.

Interpretive Signage can explain the site's history and relationship to the Centre Vein.

Interpretive Loop Trail. The tunnel can be included as a stop on an interpretive loop trail following the southwest side of Chase Gulch. See the Centennial Tunnel (5GL.2206) above for a description.

Site 5GL.2208 Robert Emmett Mine: Level 2 ***Project: Land Disposal***

The Robert Emmett Mine was worked intermittently from 1863 through the 1910s, and possibly later. Central City investors funded development through the Robert Emmett Shaft (5GL.7.11), Level 1 tunnel (5GL.2209) around 100' below, and Level 2 tunnel (5GL.2208) another 100' farther down Maryland Mountain's south flank.

Level 2 tunnel, the lowest, was bored northeast directly along the vein from Chase Gulch's north floor. Presently, Level 2 is a simple archaeological resource limited to the tunnel and its waste rock dump, a minor contributing element of the gulch's landscape. Archaeological features representing buildings, structures, or equipment are absent.

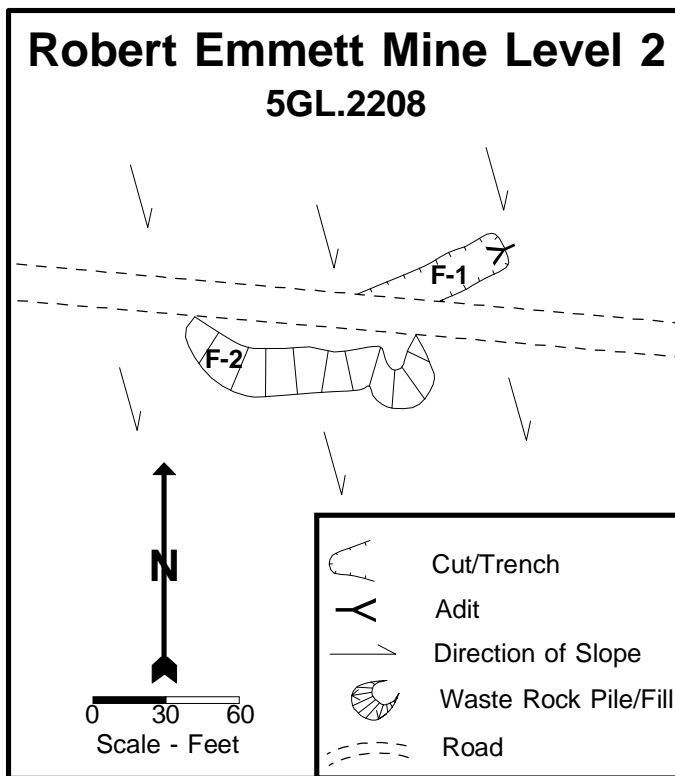


Figure 4.86: Plan view of Robert Emmett Mine: Level 2, 5GL.2208.

Robert Emmett Mine: Level 2 Description

The tunnel (F1) is clearly evident, extending underground from the end of a trench 7' wide and 43' long. The trench head has since collapsed and blocked the portal with rubble, a gap 2' high now remaining. Using ore cars, miners dumped waste rock at the trench mouth, building up a fan of hummocky lobes (F2) 33'x99' in area and 7' thick. Historically, a blacksmith shop stood on the dump near the mouth, while a wagon road crossed the mid-portion. During the early 1990s, DRMS conducted a closure project in the area and used the wagon road to access various properties, including Level 1 tunnel and the Robert Emmett Shaft. At this time, DRMS widened the road with a bulldozer and scraped the dump's top-surface, erasing all historic features including the shop platform. The site is thus limited today to the tunnel and overall dump, which does possess its original footprint and profile but not its surfaces.

The site has a light artifact assemblage scattered across the dump. Structural items are limited to a few cut nails, window fragments, and decayed lumber pieces. Other artifacts include a wagon tire, amethyst bottle glass, and a recent sanitary food can. The cut nails reflect an age range spanning the 1860s-1880s.

Buried archaeological deposits are unlikely because activity was simple and tended not to generate material in volume, which was thrown out onto ground-surface. Further, the deposition environment of steep slopes is not conducive to the accumulation of buried deposits.

Robert Emmett Mine: Level 2 Condition and Integrity

The resource is poorly preserved because bulldozing associated with an early 1990s mine closure project erased all historic features. Only the tunnel's access trench and the waste rock dump are clearly identifiable, and they are becoming overgrown with brush and evergreen saplings.

The resource possesses little integrity. Without a good assemblage of archaeological features, the resource has no integrity of design, materials, workmanship, or association. But, the tunnel's pronounced access trench combined with substantial waste rock dump offer some feeling of mining. The resource is in an intact setting.

Robert Emmett Mine: Level 2 Significance

The site's principal value is as a contributing element of Chase Gulch's historic landscape. The waste rock dump is a landmark immediately above Chase Gulch Road's north side, and compliments the dumps of other nearby mines.

Robert Emmett Mine: Level 2 Management Recommendations

Regarding Section 106, the site is significant as an element of the landscape, and it lies partially on BLM land tracts. Disposal of the tracts from federal to local government control adversely affects the landscape. Mitigation may be required.

Robert Emmett Mine: Level 2 Heritage Tourism Potential: None

No potential.

Site 5GL.2209 Robert Emmett Mine: Level 1 Project: Basic Inventory

The site is the Robert Emmett Mine's Level 1 Tunnel, around 100' below the Robert Emmett Shaft (5GL.7.11), and immediately above the Gilpin Tramway railroad grade. Level 1 is a simple resource limited to a stope-like opening and its waste rock dump. All evidence of surface facilities was destroyed by mine closure during the early 1990s.

Robert Emmett Mine: Level 1 Description

For the opening, miners blasted an incision directly along the vein, trending northeast-southwest through granite. Starting from the incision, they bored Level 1 tunnel northeast along the vein and intersected the Robert Emmett Shaft at depth. They also extracted ore straight down, creating a vertical stope. Using ore cars on a track, the miners dumped waste rock east and west along the mountainside, building up a bench 66'x155' in area and 8' thick.

During the early 1990s, DRMS closed the incision by bulldozing in waste rock scraped off the dump, and then installing concrete panels. In scraping the dump, DRMS erased all traces

of surface facilities such as a tunnel house platform and ore sorting station. The site is thus limited to the concrete panel cap and the dump, which is a contributing element of Chase Gulch's historic landscape.

The resource has a sparse artifact assemblage limited to a few cut nails, pieces of forge clinker, dimension lumber, and a stovepipe length, all scattered on the dump's flank. The nails reflect an age range spanning the 1860s-1880s. Buried archaeological deposits are unlikely because the mine's simple activity tended not to generate material in volume, which was thrown out onto ground-surface. The deposition environment of steep slopes is not conducive to the accumulation of buried deposits.

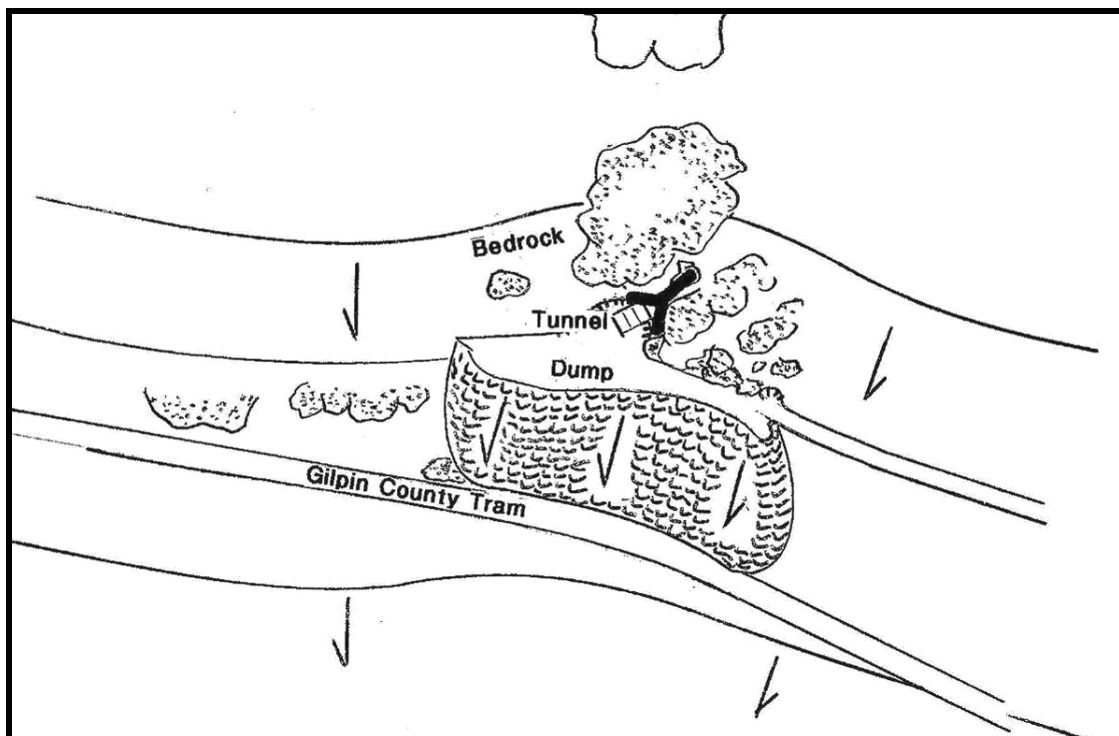


Figure 4.87: Plan view of Robert Emmett Mine: Level 1, 5GL.2209.

Robert Emmett Mine: Level 1 Condition and Integrity

The resource is poorly preserved, as mine closure destroyed all archaeological features representing surface facilities. The stope is capped with concrete panels and the waste rock dump was scraped by a bulldozer. However, the dump still possesses its original profile and footprint.

Individually, the resource possesses poor integrity. Without buildings, structures, their archaeological features, or a meaningful artifact assemblage, the site lacks integrity of design, materials, and workmanship. As it is located in a good setting, the site offers some feeling and association.

Robert Emmett Mine: Level 1 Significance

The site's primary value is as an important contributing element of the historic landscape. The prominent, light-gray dump is visible from numerous vantage points and compliments the

larger waste rock bench belonging to the Robert Emmett Shaft immediately above.

Robert Emmett Mine: Level 1 Management Recommendations

- Simple name sign on Gilpin Tramway bed, passing the waste rock dump's toe.

Robert Emmett Mine: Level 1 Heritage Tourism Potential: Low

Interpretive Sign posted on the tram bed can identify the mine and its relationship to the Robert Emmett Shaft upslope.

Site 5GL.2210 *Workers' Housing*

Project: Land Disposal

During the 1860s or 1870s, a row of seven buildings stood on the north side of Chase Gulch's floor, opposite the Union Tunnel (5GL.2201). The row was a satellite collection of residences for workers employed in surrounding mines and possibly early placer operations on the gulch floor. The buildings are long gone, now represented by distinct earthen platforms and rock foundations immediately above Chase Gulch Road. The site is a significant archaeological example of workers' housing, the resource type.

Workers' Housing Description

The northwestern most building was L-shaped over a well-made dry-laid rock cellar countersunk into a larger cut-and-fill platform (F1). The platform is semicircular and 27'x45' in area, while the cellar is 18'x30' in plan and outlines the building's footprint. Thick Gambel oak and fir saplings conceal the platform's surface, and the cellar became filled with humus and eroded earth to a depth of 4'.

A cut-and-fill platform (F2) marks a cabin that stood to the southeast, along Chase Gulch Road. Difficult to interpret, the platform is 18'x20' in area with a flat surface and faint cut-and-fill-banks. A ponderosa pine at least a century old stands along the northwest edge.

Another cabin stood on a platform (F3) a short distance farther southeast. The platform is well-graded and 18'x22' in area, its fill-bank retained by a rock wall at one time 2½' high. The cut-bank is distinct, 12' having been blasted from a granite outcrop. Gambel oak and aspens have overtaken the surface, blanketing it with duff.

The center-most building stood on a poorly defined platform (F4) whose surface slopes down toward the road. The platform is 36'x40' in area with a well-made rock wall 3' high holding back the fill-bank. The platform's surface lacks characteristic rock alignments or a flat surface outlining the building's footprint. Thick sod and brush grow on most of the platform, while the rock wall is a good small-scale feature visible along the road.

A dry-laid rock foundation (F5) outlines the most substantial building in the complex. The foundation is 34'x36' in plan and consists of a perimeter 3' thick and around 3' high. A cellar 12'x15' in area and 3' deep with slumped sides is in the south corner, a doorway breeching the foundation for access. A rock wall 4' high retains the slope above the foundation. Gambel oak and grass grow over the surface.

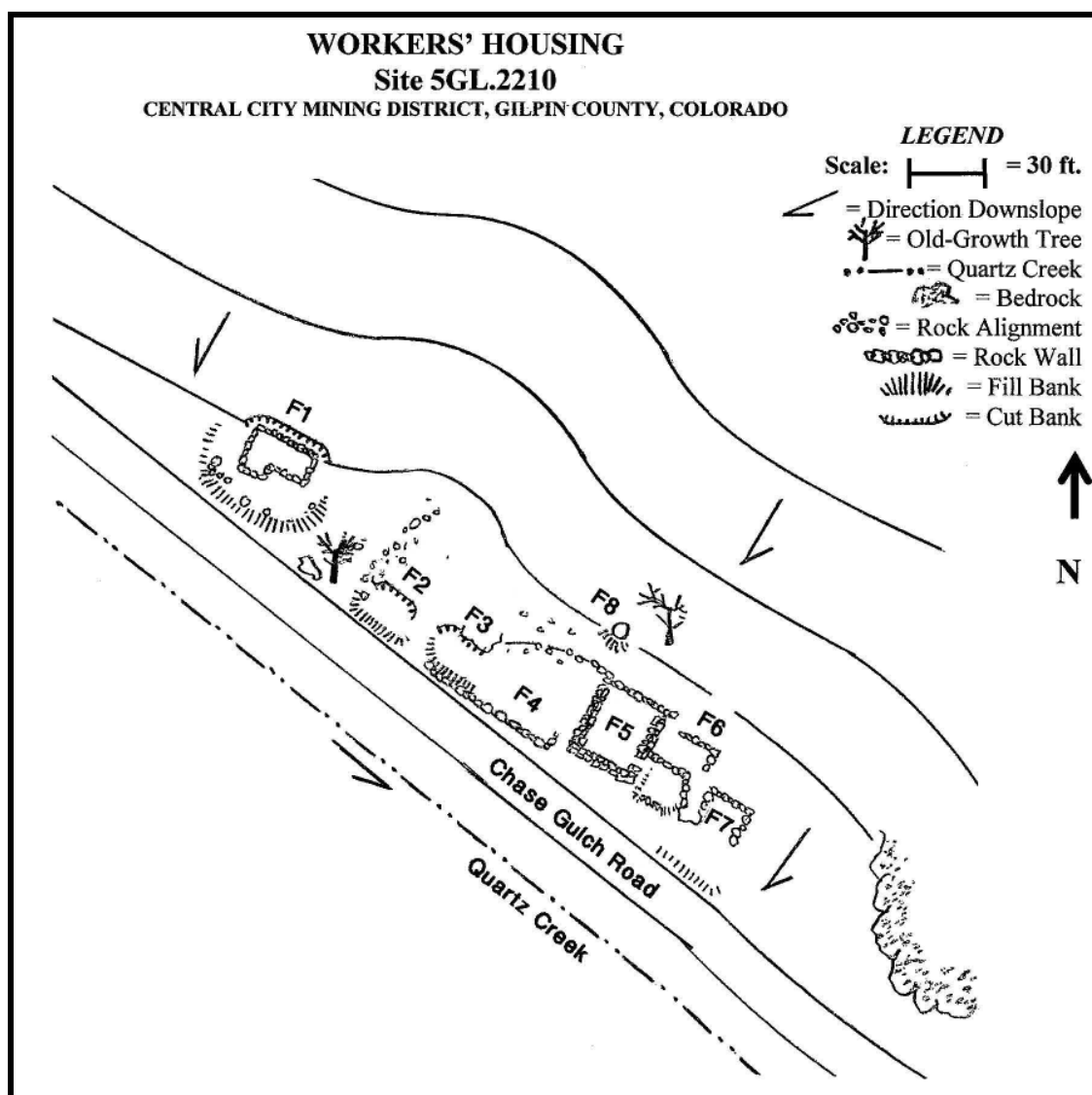


Figure 4.88: Plan view of Workers' Housing, 5GL.2210.

A frame building stood on a two-tier platform (F6) adjacent to the east. The building was 18'x35' in plan, the platform's upper tier supporting the floor and the lower providing storage underneath. The upper tier is 18'x15' in area, the lower is 18'x20' in area and 3' down, and both are defined by dry-laid rock walls. Sod and erosional deposits cover the surface.

The southeastern most building stood on a poorly graded cut-and-fill platform (F7). The upslope, northeast half was cut from the slope and retained by rock walls 4' high. An alignment of large rocks retains the southeast half. Overgrown with grass, the platform's surface slopes down toward the road.

The residents relied on privies for personal use, and although each household would have had its own, only one can presently be identified. A pit (F8) 4' in diameter and 18" deep is above the center platform and main foundation. Back dirt extending downslope suggests the pit has some depth.

Relative to residential complexes, the site possesses a sparse artifact assemblage. During

the last 40 years, bottle collectors have removed whole bottles, while thin iron items have disintegrated. Thick vegetation and storm runoff subsequently buried small artifacts with sediment and humus. In spite of this, cut nails, window glass, bottle and tableware fragments, and domestic hardware are scattered around all foundations and platforms except for the smallest. A few artifacts such as corset stays, stocking clasps, and an ice skate confirm the presence of women and children. In combination, cut nails, applied bottle finishes, and crude glass reflect an age range spanning the 1860s-1880s.

Buried archaeological deposits are likely and probably significant. In particular, the northwestern foundation (F1), main foundation (F5), and neighboring platforms (F6 and F7) almost certainly offer yard deposits that might be thin but meaningful. The privy pit also probably contains buried artifacts.

Workers' Housing Condition and Integrity

The resource appears preserved on an archaeological level. All buildings, structural materials, and large artifacts were removed long ago. The remaining foundations and platforms clearly outline the footprints of all buildings except for the two small northwestern cabins. All the foundations and platforms are fully overgrown with brush, grass, and fir and aspen saplings. Sheetwash blanketed all level surfaces with sediment, concealing subtle foundation elements and small artifacts. Heavy runoff also knocked over upper courses of all walls.

The resource possesses several forms of integrity. With the foundations and platforms clearly apparent, the site exhibits design as a workers' housing complex. Well-made, the walls and foundations convey materials and workmanship typical of the area's dry-laid masonry. The site also has integrity of association and setting.

Workers' Housing Significance

The resource is significant in several ways. First, the prominent platforms and their rock walls are subtle contributing elements of Chase Gulch's landscape. The walls line the north side of Chase Gulch Road and although overgrown, provide small-scale detail and variety. The walls also convey a sense of masonry workmanship at one time common throughout the area.

The resource is also potentially eligible for the NRHP and SRHP under several Criteria. In terms of Criterion A, the site played an important role as housing for the workers that ran the local mining and milling industry. Under NRHP Criterion D and SRHP Criterion E, the site's surface artifact assemblage and buried deposits will yield important information about the area's workforce, including diet, health, substance abuse, gender, family, and possibly ethnicity.

Workers' Housing Management Recommendations

Regarding Section 106, the site lies entirely on a BLM land tract, and is individually eligible and an element of the landscape. Disposal of the tract from federal to local government control adversely affects the site. Mitigation may be required.

- Intensive site documentation, archival research, and significance evaluation.
- Thin vegetation and saplings on each building platform. Use extreme caution to minimize disturbance. Requires supervision of monitor. Stumps to grade.

- Interpret with signage posted on Chase Gulch Road. Signs can discuss mining industry workforce, ethnicity and gender, living conditions, and lifestyle.
- Small artifacts on-site may be theft items. Discuss best approach for securing.
- Archaeological investigation of principal building platforms. Subsurface testing will probably reveal artifacts enhancing knowledge of residents and lifestyle.
- Archaeological investigations can be popularized for publicity.

Workers' Housing Heritage Tourism Potential: High

Interpretive Signage. The site provides a good opportunity for a fresh perspective on labor, the underpinnings of Black Hawk's mining industry. Topics rarely discussed include living conditions, gender, ethnicity, family, diet, health, and substance abuse.

Site 5GL.2211 Aetna Tunnel

Project: Basic Inventory

The Aetna Vein was discovered in 1863 and initially worked through an open-cut and shallow adit. Later, a mining outfit bored the Aetna Tunnel southwest into Winnebago Hill to work the vein from the bottom up, and also sank the Aetna Shaft (5GL.2212) in order to develop the vein's depths. The shaft and tunnel intersected underground. Today, the tunnel is an archaeological resource whose substantial waste rock dump is a prominent element of Chase Gulch's historic landscape.

Aetna Tunnel Description

Historically, the mine's surface facilities were simple. The tunnel extended underground from the end of a trench lined with rock walls and capped by a snowshed roof. A track exited the tunnel and curved southeast across a substantial bench of waste rock. A combination blacksmith shop, office, and stable stood southeast of the tunnel on an earthen platform. All buildings, structures, and equipment were removed long ago, leaving a simple assemblage of archaeological features.

The tunnel (F1) is presently a distinct and identifiable trench, though no longer intact. The trench is 8' wide and 30' long, and its rock walls have partially collapsed and the roof is gone. The dump (F2), created when miners dumped waste rock off the track, is a substantial bench of material 40'x179' in area and 7' thick. A landmark visible from Chase Gulch Road, the dump is well-preserved with original top-surface, footprint, and profile.

A well-defined earthen platform (F3) outlines where the shop building stood. The platform, graded with cut-and-fill construction, is L-shaped, 14'x46' in plan, and oriented northwest-southeast. The shop was in a room 14'x20' in area retained by a rock wall in the platform's northwest end, while an office and stable were located in the middle and southeast end. Remnants of a dry-laid rock forge are still recognizable in the shop section. The platform is becoming overgrown with young trees, and storm runoff has washed sediment over the surface.

The site possesses an impoverished artifact assemblage of cut nails, sheet iron, blacksmithing refuse, and bottle glass distributed around the shop platform. Within recent years,

recreationists have used the site for target practice, leaving a bullet-perforated vehicle fuel tank, realty sign, and beverage containers. The cut nails reflect an age range spanning the 1860s-1880s. Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto ground-surface. Further, the deposition environment of steep slopes is not conducive to the accumulation of buried deposits.

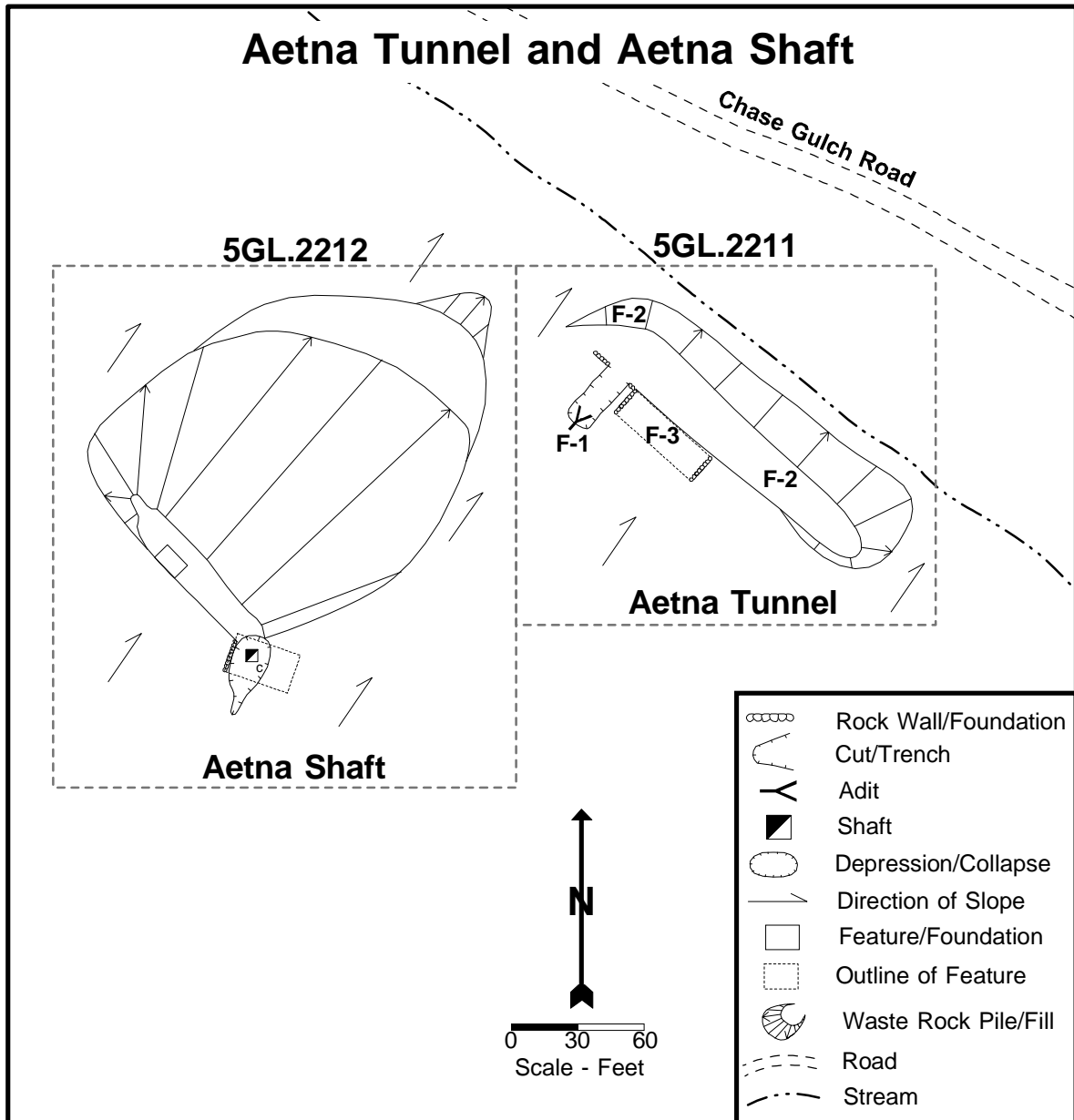


Figure 4.89: Plan view of Aetna Tunnel, 5GL.2211, and Aetna Shaft, 5GL.2212.

Aetna Tunnel Condition and Integrity

In condition, the resource is fairly well preserved on an archaeological level. Though the tunnel portal has collapsed it is identifiable, and the waste rock dump possesses historic surfaces

and shape. The shop platform is recognizable, although sheetwash has deposited sediment over its surface, concealing small artifacts. Evergreen saplings are taking hold on the platform and at the edges of the dump.

The resource possesses several aspects of integrity. The archaeological feature assemblage, however simple, conveys the general design of the overall surface plant. The site has feeling and association of mining, and lies in an intact setting. Without buildings or structures, the site lacks integrity of materials and workmanship.

Aetna Tunnel Significance

The Aetna Tunnel, with its substantial waste rock dump, is a contributing element of Chase Gulch's historic landscape. On the south side of Quartz Creek, the dump is a landmark visible from Chase Gulch Road and compliments the visual impression created by neighboring mines including the Aetna Shaft, Road or Elephant Shaft, and Bonanza Mine and Mill. Collectively, the four sites are evocative of the area's mining industry.

The site is also potentially eligible for the NRHP and SRHP under Criteria A and C in the area of Industry. The tunnel was an important component of the greater Aetna Mine (which included the Aetna Shaft), and as such, was an early and significant gold producer. The site is also a good archaeological example of a tunnel mine.

Aetna Tunnel Management Recommendations

- Intensive documentation and archival research.
- Interpretive sign on dump explaining the greater Aetna operation and its history (shaft and tunnel).
- Thin saplings on dump, tunnel house platform, and around tunnel portal. Use caution and supervision of qualified monitor. Stumps to grade.

Aetna Tunnel Heritage Tourism Potential: High

The site is a good candidate for interpretation because of its importance, preserved archaeological features, and easy access. Signage posted on the dump would apply to both the tunnel and shaft for economy.

Interpretive Signage could explain the greater Aetna history, relationship of tunnel and shaft, and the tunnel's surface facilities.

Site 5GL.2212 Aetna Shaft **Project: Basic Inventory**

The Aetna Shaft was sunk during the 1860s to intersect the Aetna Tunnel (5GL.2212), immediately below. The shaft was worked during the 1920s, and during that period the operators constructed a simple hoisting system and small blacksmith shop. See Figure 4.89 above for a site plan.

Aetna Shaft Description

Presently, the site is an archaeological example of a combination shaft and tunnel mine. All structures, equipment, and first-generation buildings were removed long ago, leaving an assemblage of archaeological features and the 1920s shop, which still stands. Overall, the site is among the most prominent in Chase Gulch and the shop among the handful of intact mine buildings.

The shaft collapsed decades ago and became a subsidence crater 17'x38' in area that may have drawn in adjacent, small-scale features. At one time, a tunnel extended underground southwest from the shaft, and it too collapsed and enlarged the subsidence area. A wrecked two-post gallows headframe, the sole remnant of the hoisting system, lies across the tunnel.

Using ore cars on a track, miners dumped waste rock around the shaft collar, building up a distinct pad of material (F2) 109'x147' in area and 8' thick. The southeastern portion slumped into the shaft's subsidence pit. The remainder of the dump possesses its original surfaces, footprint, and profile.

Originally, a frame shaft house enclosed the shaft, hoisting system, and a blacksmith shop. The building stood on a platform (F4) 18'x30' in area, the northwestern half of which was drawn into the shaft's subsidence crater. Presently, only the southeastern portion is intact and 15'x18' in area, while the northwestern end is represented by a well-made rock wall 6' high. The shaft house itself was dismantled circa 1920.

Two features remain from the 1920s operation. One is the shop (F3), which still stands, and the other is a foundation for an ore bin (F5). The shop is a simple frame building with a shed roofline 8'x13' in plan, 8' high at the front (northeast) and 5½' high at the rear. The support system is a post-and-girt frame with 2"x4" and 4"x4" studs spaced every 4', and 2"x4" rafters spanning between the walls. The walls and roof are sided with 1" thick planks clad with a patchwork of both corrugated and smooth sheet iron. Most materials were salvaged from elsewhere. The building is severely dilapidated with a leaking roof, decayed timber foundation, gaps in wall siding, and no windows or door.

The ore bin was a sloped-floor type 15'x84' in area descending the waste rock dump's flank. The structure was removed decades ago, leaving a foundation of log pilings and a rock wall at bottom embedded in the dump.

The site possesses an incomplete artifact assemblage of structural materials and industrial refuse. Most of the artifacts had been concentrated around the shaft and shaft house platform but were swallowed when the shaft collapsed. Some structural and industrial artifacts, primarily shop refuse and a carbide drum, are distributed on the waste rock dump's edges and around the standing shop. Caustic, mineralized waste rock disintegrated most other iron items. Dateable artifacts reflect two age ranges, one spanning the 1870s and 1880s, and the other the 1920s. Dateable artifacts from the first period include cut nails, crude bottle glass, and a soldered can. Later items include a carbide drum, selenium bottle glass, a 5 gallon can, several sanitary food cans, and the extensive use of salvaged materials for the shop.

Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto the ground. Further, the extremely steep deposition environment is not conducive to the accumulation of buried deposits.

Aetna Shaft Condition and Integrity

In condition, the site is marginally preserved. The shaft and adjacent tunnel have collapsed, drawing surrounding features into a large subsidence area. Almost nothing is left from the first-generation surface plant except for distal ends of the original shaft house platform. With the center gone, the platform is uninterpretable. Missing altogether is evidence of the hoisting system and first-generation shop. The 1920s shop, however, still stands but is threatened with collapse. The roof leaks, gaps in the walls admit rain and snow, and the foundation is rotten. Thick, young evergreen and aspen saplings are encroaching on the dump and shop.

The resource possesses mixed integrity. The shop alone has integrity of design, materials, workmanship, and association relative to the 1920s. As a whole, the site lacks integrity of design because too many features were lost when the underground workings collapsed. But, the shop, waste rock dump, and setting combined have integrity of feeling.

Aetna Shaft Significance

The site is significant in two ways. First, it is a prominent element of Chase Gulch's historic landscape. The large dump and standing shop are visible from numerous vantage points. Further, the shop is significant as one of the few standing mine buildings in the gulch, and as such, contributes strongly to the feeling of mining. Second, the shop may be individually eligible for the NRHP and SRHP under Criteria C in the areas of Industry and Architecture. The building is a good example of the types of simple blacksmith shops cobbled together with salvaged material during the 1920s.

Aetna Shaft Management Recommendations

- Intensive documentation and archival research (in conjunction with Aetna Tunnel).
- Interpretive sign on Aetna Tunnel dump can explain the greater Aetna operation and its history.
- Stabilize blacksmith shop, significant as one of only several standing mine buildings in Chase Gulch. Replace missing roof and wall siding with historically compatible materials. Replace wooden foundation footers. Clean out interior.
- Thin saplings around standing blacksmith shop.

Aetna Shaft Heritage Tourism Potential: High

The site is a good candidate for interpretation because of its importance and prominence. Signage applying to both the tunnel and shaft can be posted on the Aetna Tunnel dump below for economy. The shaft site may not be suitable for access. Approach is difficult, and the site offers little except for the shop building.

Interpretive Signage on the Aetna Tunnel dump could explain the greater Aetna history and relationship of tunnel and shaft.

Site 5GL.2213 *Bonanza Mine and Mill*
Project: Basic Inventory

The Bonanza was among the largest and most advanced operations in Chase Gulch. At its height, the Bonanza included a sizable tunnel bored north into Maryland Mountain, an advanced and mechanized surface plant at the portal, and a sprawling ore concentration mill. Prominent Gilpin County investors George H. Danforth and Theodore H. Becker organized the Bonanza & Union Tunnel & Mining Company in 1879, consolidated a large assemblage of claims on the mountain, and began the tunnel. Their interest was not only penetrating gold-bearing veins on their own claims, but also numerous veins on other people's properties. For a subscription fee, the independent property owners could use the tunnel to efficiently work their veins from the bottom up. The tunnel intersected at least ten veins, sufficient to justify building the Bonanza Mill in 1885. But the mill was ineffective and operation stalled in 1887. Becker leased the property out from 1899 through 1903, and 1913 through 1917. Expert lessees used the tunnel from 1921 into 1928 to work distant veins deep underneath Maryland Mountain.

Today, the Bonanza is a prominent historic resource serving as gateway into Chase Gulch open space. The site is on Chase Gulch Road's north side, west of the open space gate, and nestled into the mouth of a minor seasonal drainage. All machinery and structural elements except for an assay shop were removed long ago, leaving an impressive assemblage of rock foundations, walls, and earthwork. Inhabited as a residence as recently as the 1990s, the assay shop is well-preserved with most of its original elements including brick assay furnace. Regarding significance, the site is both a landscape anchor and individually eligible under most if not all NRHP and SRHP Criteria.

Bonanza Mine and Mill Description

As an archaeological site, the Bonanza can be divided into three feature complexes: the tunnel and support facilities, the mill foundations, and administrative building ruins.

For the tunnel (F1), miners first blasted a trench 10' wide and 36' into solid rock, and then continued underground. The trench is well-preserved with intact tunnel portal at the end. The portal is 9'x6' in-the-clear (interior dimensions), with the tunnel constricting to 8'x6' in-the-clear farther in. A track and compressed air line extend underground. In 1996, DRMS installed a grate closure with brass cap stamped Site P8, Project 8 234.

Miners brought waste rock out of the tunnel in horse-drawn trains and dumped it in a minor drainage outside the portal. Over time, they built up a bench (F2) 65'x170' in area and 9' thick, grading the top-surface flat for workspace. When DRMS closed the tunnel, it dumped an elongated mound of rubble cleaned from the portal on the bench.

At one time, a tunnel house enclosed the mine's blacksmith and machine shop, a timber dressing station, and a stable for the draft animals providing underground haulage. In footprint, the building featured two wings on earthen platforms flanking the tunnel, one extending west and the other northeast. The wings were similar to many other mine buildings in the area, being rectangular with shed rooflines, expertly made rock walls 18" thick and 8' high on upslope sides, and frame walls around outward-facing sides. Presently, the platforms (F3), building footprint, and rock walls remain, with all wooden elements having been removed long ago. The northeast wing was 21'x75' in plan with a frame wall (now gone) on the southeast side and rock walls the northwest and northeast sides. The wing was divided into two rooms. The southwestern was the

timber dressing shop, and the northeastern a stable 12'x21' in plan with broad doorway. The west wing was 30'x60' in plan and enclosed the machine and blacksmith shop. The platforms are preserved overall, but with no covering, young ponderosa pine trees took hold while erosional sediment and duff swept over the floor, concealing small-scale features and artifacts. In addition, the last residents left a camper and debris on the west wing.

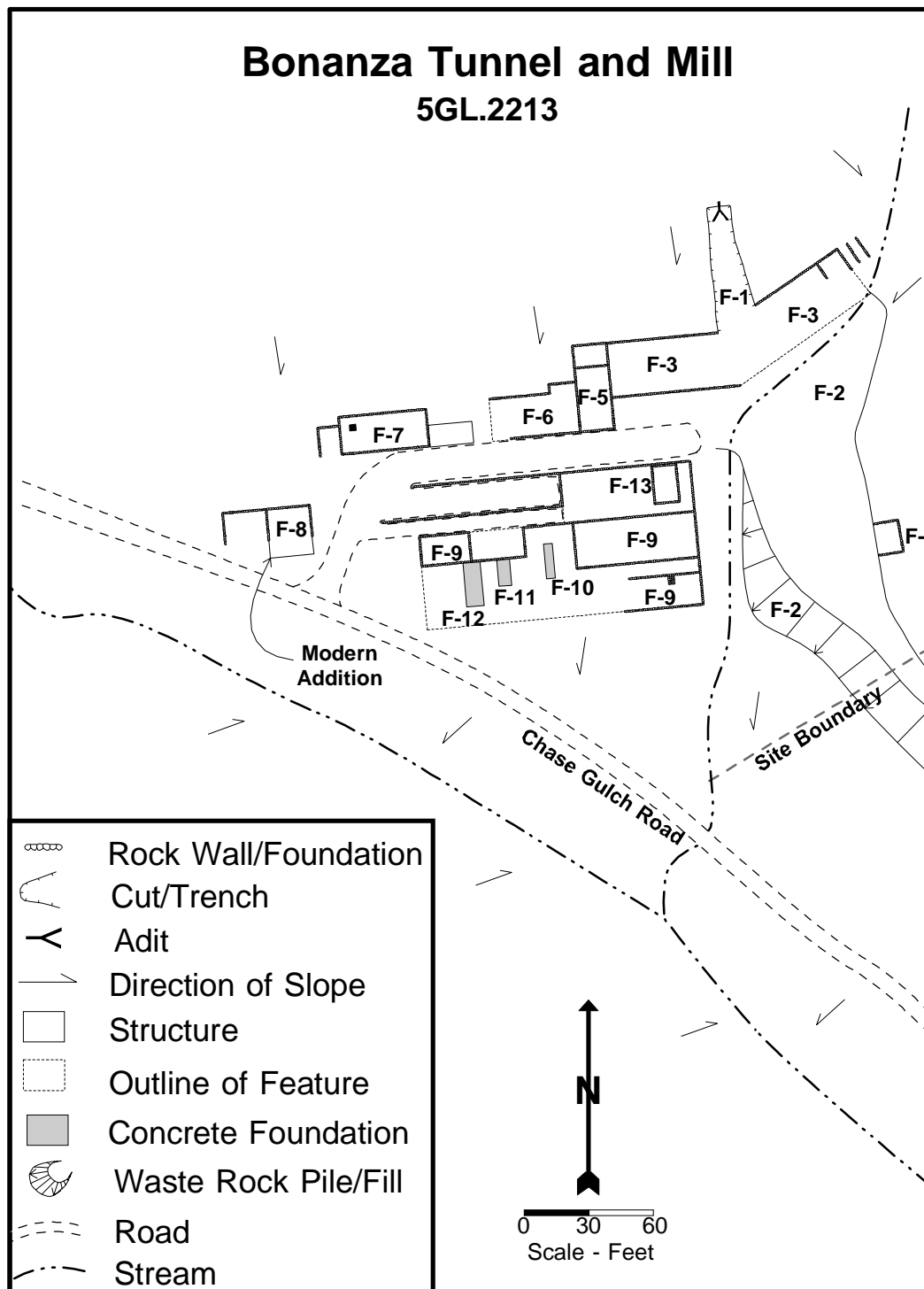


Figure 4.90: Plan view of Bonanza Tunnel and Mill, 5GL.2213.

The mining outfit stored explosives in a professionally constructed magazine (F4) east of the tunnel. Countersunk into the slope, the magazine was west-facing, 11'x13' in plan, and constructed with the same methods and materials as the tunnel house. In particular, the magazine

had a shed roofline, rock walls mortared with mud on the upslope side, and frame façade (front) facing outward. The façade was 6' high and the other walls 9' high and 2' thick.

The administrative buildings were an east-west row adjoining the tunnel house. All are ruins missing structural materials except for rock walls. The assay shop, however, stands intact with all its original elements, and represents how the other buildings were constructed. Based on the shop's form, the other buildings all had shed rooflines, 18" thick rock walls along the upslope sides, and frame facades facing outward (south). The walls were expertly executed and mortared with natural lime cement.

The assay shop (F7) was a rock masonry building 16'x36' in plan with south-facing frame façade and shed roofline. The building stands on a platform cut from the slope, and the foundation and walls are 18" thick and mortared with natural lime cement. The façade consists of sheet iron cladding pinned with cut nails to planks over a 2"x4" post-and-girt frame. The roof consists of corrugated sheet iron over 1" thick planks nailed to 2"x6" rafters. Originally, the interior was divided into two rooms each 16'x18' in plan, the western for the assay furnace and the eastern for sample processing. Both rooms have 29"x66" double-pane windows and 32"x80" doors with transoms. The assay furnace is an intact brick structure 3'x5' in plan with arched ports for the firebox, ventilation duct, and sample chambers. The site's last occupants converted the shop into a residence with interior walls, plumbing, water tanks, appliances, and an aluminum 54"x40" window. They also built a plank deck for the western doorway. The roof leaks a little and the deck is rotten and dangerous.

The first building adjoining the assay shop was an office (F6) with living quarters for a superintendent. The office proper was 13'x43' in plan and defined by rock walls 14' high. The interior was finished with whitewashed local sand plaster for brightness, and two brick chimneys for stovepipes inset into the walls. The living quarters were 13'x37½' in plan with bedrock defining the northwest side. The platform is now blanketed with earth and duff.

The next building, adjoining the tunnel house, was a storeroom (F5). The building was 17'x43' in plan with rock walls 14' high and rock benches defining three irregular levels.

When intact, the mill was designed according to convention and relied on gravity to draw ore through various treatment stages. The mill thus descended a stairstep series of four terraces that supported the mill's frame and processing machinery. Presently, the terraces are a slightly overgrown but imposing flight of masonry walls and footers, with additional foundations reflecting the powerplant.

Mill Terrace 1 (F13) supported crushing machinery, most of which was bolted to the mill's frame. Cut from the slope, the terrace is 25'x64' in plan with professionally made rock walls 9' high defining the cut-banks. The floor features three sub-levels. A rock pad 17'x20' in plan and 3' high at the east end supported the primary crusher. A second level 17'x25' in plan at center probably had screens and secondary crushing, and a third level, 3' lower at the west end, had tertiary crushing.

Mill Terrace 2 (F9) was 20'x60' in plan and likely featured amalgamation equipment. Rock walls 4' high retain the cut- and fill-banks. The platform is overgrown ponderosa pines and blanketed with duff.

Mill Terrace 3 (F9) was 22'x40' in plan and divided lengthwise into two sublevels. Function is uncertain. Rock walls 3' high retain the cut- and fill-banks, the lower being mostly collapsed. A rock machine foundation 3'x6' in plan stands on the east end, overgrown and blanketed with duff.

An engine wing extended northwest, almost fronting Chase Gulch Road, and housed the

mill's powerplant. The wing was divided into two rooms that were L-shaped in plan, with rock walls 8' high defining the cut-banks. A steam engine and waterwheel were in the eastern room, 20'x32' in plan. The engine was a straight-line steam unit 3' wide and 15' long, now represented a rock masonry foundation (F10) studded with anchor bolts. The boilers and an air compressor were in the western room, 16'x50' in plan. An overgrown stack of bricks (F11) 15'x20' in area represents the boilers, and a rock masonry foundation (F12) 7'x15' in plan the compressor.

A barn for freight animals and storage (F8) stood on Chase Gulch Road west of the mill proper. Similar in construction methods and materials to the rest of the mill's buildings, the barn was 14'x41' in plan and divided into two rooms. The western was 14'x18' in plan with plank façade and roof, which are now gone. The room and its rock walls are open to the elements. The eastern was 14'x19' in plan and refitted as a garage by the site's last residents. They assembled a plywood and plank façade in the front and a plank roof over the rock walls.

The site offers a surprisingly light artifact assemblage, considering the scale and number of features. Large items were removed during the last four decades while duff, vegetation, and sediment covered over most small artifacts. Thin iron objects also disintegrated because soil is acidic. The remaining structural materials are general and include decayed lumber fragments, cut nails, sheet iron, bricks, and window glass scattered throughout the site. Industrial refuse including shop debris and hardware is distributed around the tunnel house platform and waste rock dump. Pipe segments, several machine bolts, and more hardware are embedded in mill terrace soil, while a few assay artifacts are south and west of the assay shop.

The potential for important buried archaeological deposits is one of the site's areas of significance. Years of sheetwash sediment and duff blanketed the tunnel house floor and original surfaces of mill terraces. The tunnel house probably has small-scale features reflecting design and content of tunnel houses, and in particular how the shop was equipped. The mill terraces likely have hidden machine foundations capable of conveying generalities of the ore treatment process, as well as details of appliances. Both inquiry topics are not well understood at present.

Bonanza Mine and Mill Condition and Integrity

The Bonanza Mine and Mill complex is very well preserved on an archaeological level. Further, the assay shop is an outstanding and rare example of its resource type: the type of shop associated with large mills dating to the 1880s. Regarding the mine and mill complex, the platforms and foundations representing the tunnel house, administrative buildings, and mill appear complete. They are, however, becoming overgrown with brush, evergreen trees, and aspens. Years of sheetwash and duff have also buried their surfaces, concealing small-scale features and artifacts. Some of the walls have suffered minor failure in localized sections.

The assay shop has been subject to surprisingly little improvement despite serving as a residence as late as the 1990s. Most woodwork and even sheet iron cladding on the façade are original. The roof has been reclad with corrugated sheet iron and windows and doors have been replaced. Two recent walls divide the interior into separate rooms, but the floor, exposed framing, and assay furnaces are original.

The site possesses sound integrity on an archaeological level. The platforms and foundations clearly convey a generalized design of the tunnel's surface plant, and specifics of the administrative buildings and mill. The extensive rock walls also display the materials and characteristic workmanship of Cornish-influenced masonry typical of Gilpin County. The site has feeling and association of mining and milling, and lies in an undisturbed setting.

The assay shop conveys details regarding design, materials, and workmanship typical of shops at one time common among Gilpin County's mills. The building also has feeling, association, and setting of assaying during the 1880s.

Bonanza Mine and Mill Significance

The Bonanza Mine and Mill complex is among Black Hawk's significant mining resources. The site is an anchor of Chase Gulch's historic landscape, serving as a prominent landmark at the gulch's eastern gateway. The imposing assemblage of masonry walls and intact assay shop convey a strong sense of Black Hawk's mining history and contribute to a sense of mystery and intrigue. The site is also among a group of other large-scale mines in the gulch's eastern gateway including the Road or Elephant Shaft, Aetna Tunnel and Shaft, Worker's Housing, and Union Tunnel. Further, the assay shop is important as one of the few mine buildings still standing in the gulch.

The site is significant enough to qualify under most if not all NRHP and SRHP Criteria. Areas of Significance include Architecture, Archaeology, Engineering, and Industry. Under Criterion A, the Bonanza Mine and Mill was among Black Hawk's large and highly productive operations. In terms of Criterion B, the operation was the work of an experienced engineer who could be identified through archival research. Regarding Criterion C, the site is a good archaeological example of a combination mine and mill. The assay shop alone is an outstanding and rare example of its resource type: the circa 1880s shops associated with large mills. The mine, mill, and shop also exhibit characteristics of Cornish-influenced masonry. The site's archaeological potential qualifies it under NRHP Criterion D and SRHP Criterion E.

Bonanza Mine and Mill Management Recommendations

- *The Bonanza is among the largest, most complex, and richest sites in Chase Gulch.*
- Intensive documentation and archival research, including significance evaluation. Information to be used for interpretation.
- Interpretive loop trail beginning at stable on Chase Gulch Road, up past assay shop, to tunnel portal. Trail then descends mill foundation's east side, turns along the south side, back to start.
- Interpretive signage. Label each major feature. Detailed discussions for select features including assay shop, tunnel, explosives magazine, mill foundation, steam engine foundation, boiler setting.
- Stabilize and secure assay shop. The building is fairly well preserved at present, and immediate repairs will save costs in the long term. Repair roof. Remove rotten deck. Clean out interior. Replace windows and doors with period versions.
- Reconstruct assay shop interior.
- Remove recent junk.
- Clean out tunnel portal.
- Enhance the resource by thinning saplings on tunnel house platform, magazine, and mill foundation. Requires supervision. Leave buffer of trees between site and Chase Gulch Road.
- Fully expose steam engine foundation, compressor foundation, boiler setting remnant. Requires supervision.

- Conduct formal archaeological investigation of mill terraces. Testing may reveal important information regarding ore treatment process and machinery.
- Site improvements and archaeological investigation can be popularized for publicity.

Bonanza Mine and Mill Heritage Tourism Potential: High

The Bonanza Mine and Mill is one of Chase Gulch's most accessible, prominent, interesting, and interpretable resources. The site is also among the most historically important and is a gateway landmark. As a combination mine and mill, the Bonanza and its extensive features encapsulates many aspects of Black Hawk's industrial history.

Interpretive Loop Trail. A short trail can be graded through site with signs labeling each principal feature. Interpretive stations provide greater detail for important topics. The trail begins at the stable on Chase Gulch and ascends an existing path into the site, passing the assay shop, mine office ruin, and the tunnel house platform. The trail turns south (right) and descends along the mill foundation's east side. At bottom, the trail turns west (right) and crosses the mill's lower terrace, passing the steam engine foundation, boiler setting ruin, and compressor foundation. The trail continues west back to start.

Interpretive Signage. Label each principal feature with a simple sign. Post interpretive signs at points of interest along loop trail including assay shop, tunnel house platform, and explosives magazine. Multiple signs explain mill process. Signs can be posted on north overlook, along east side, and at the steam engine, boiler, and compressor foundations. If assay shop interior is reconstructed, signs inside can explain assay process. Highlight Cornish influence on building design, methods, and materials.

Site 5GL.2214 Road or Elephant Prospect Shaft ***Project: Basic Inventory***

During the 1860s, prospectors traced the Road or Elephant Vein up Maryland Mountain's south flank. The vein trended northeast and they staked a series of claims over the formation, sinking shafts in search of ore. The site discussed here was probably one of those exploratory probes, presently limited to the shaft, an adjoining platform, and a fan of waste rock. The shaft is located immediately above the later Gilpin Tramway railroad grade, and its small dump is a landscape icon easily spotted along the tram bed.

Road or Elephant Prospect Shaft Description

The collapsed shaft is now a pit 10'x12' in area and 6' deep with no original form. The waste rock fan is small (only 33'x45' in area and 3' thick) but distinct on the tram's upslope side. The platform extends south and is 5'x8' in area. A few cut nails are the only artifacts, and buried archaeological deposits are absent.

Road or Elephant Prospect Shaft Condition and Integrity

The resource is poorly preserved. The shaft collapsed and drew in the dump's central portion where small-scale features might have been located. The platform is overgrown, blanketed with sheetwash, and almost indistinct. The site is otherwise lacking in historic attributes. In integrity, the resource lacks elements of design, materials, workmanship, feeling, and association. The setting is intact.

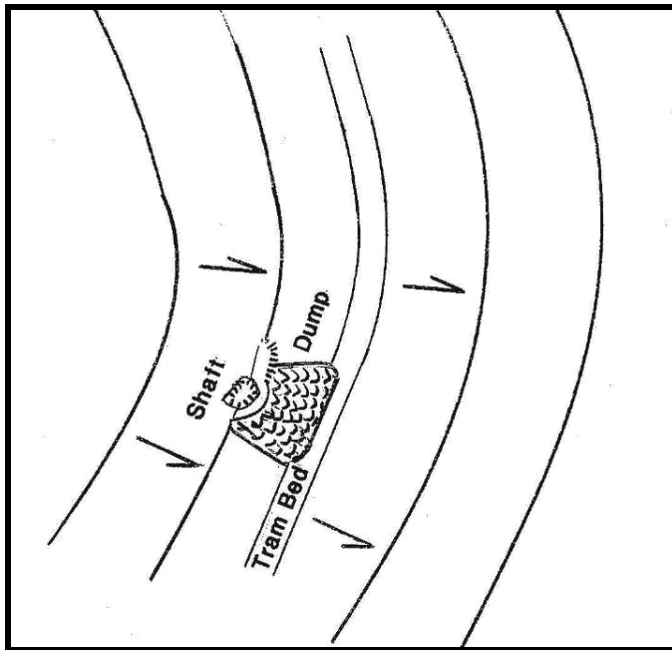


Figure 4.91: Plan view of Road or Elephant Prospect Shaft, 5GL.2214.

Road or Elephant Prospect Shaft Significance

The resource's only significance is as a small-scale contributing element of the landscape. However small, the dump is a historic feature on the Gilpin Tramway railroad grade, contributing to the feeling of mining and prospecting in the area.

Road or Elephant Prospect Shaft Management Recommendations

No action recommended.

Road or Elephant Prospect Shaft Heritage Tourism Potential: None

No potential.

Site 5GL.2215 Gettysburg Mine
Project: Basic Inventory

In 1869, a mining outfit sank a shaft into the northeast shoulder of Bates Hill to develop the Gettysburg Vein. Named after the vein, this mine produced regularly through the 1870s as Central City's Casey Street neighborhood grew around it. Today, the Gettysburg is a landscape icon between two inhabited houses on the north side of Casey Street. The house addresses are 3320 on the site's west side and 3330 on the east. Although the resource is in Central City, it was recorded for the inventory because its large waste rock dump is a prominent element of Chase Gulch's landscape. The dump descends Bates Hill's northeast slope, and it and flanking houses are visible from numerous vantage points in the gulch. The site is within the NHL.

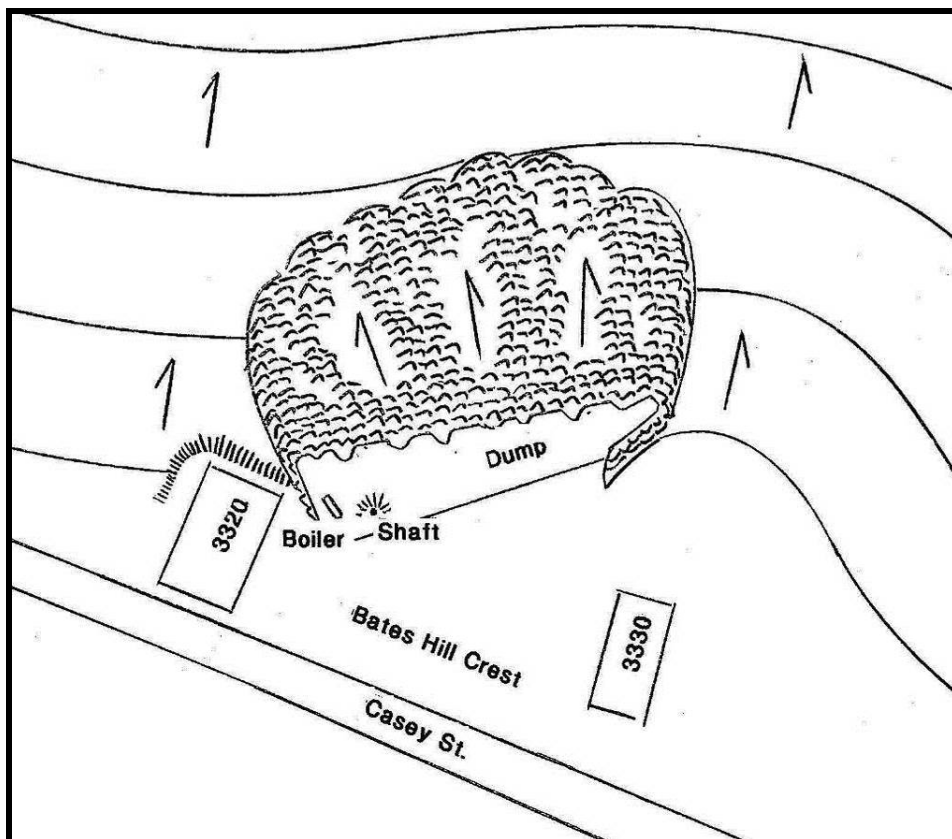


Figure 4.92: Plan view of Road or Elephant Prospect Shaft, 5GL.2215.

Gettysburg Mine Description

The site is simple, limited to the dump and a closure monument marking the shaft. DRMS plugged the shaft with aggressive methods during the early 1990s, destroying all historic features except for the dump. In particular, the dump's top-surface was pushed into the shaft and a concrete plug installed. The dump is a broad, barren fan of waste rock 135'x195' in area and 12' thick with original footprint and profile. The site possesses only a few artifacts including cut nails, a boiler shell, and blacksmithing refuse. Buried archaeological deposits are absent.

Gettysburg Mine Condition and Integrity

The resource is poorly preserved, as aggressive mine closure destroyed nearly all historic features. The dump's top-surface and hoisting system area were scraped and pushed into the shaft, which was plugged with concrete. The dump, however, is distinct. Mine closure destroyed the resource's integrity. Without historic features, the site offers no design, materials, workmanship, or feeling. The setting, with its preserved period residential buildings, is intact.

Gettysburg Mine Significance

The site is an icon of Chase Gulch's landscape. Spilling down Bates Hill's northeast flank, the dump and adjacent period houses form a historic skyline along the gulch's south side. The dump is visible from numerous vantage points and connects mining in the gulch with that in Gregory Gulch to the south.

Gettysburg Mine Management Recommendations

No action recommended.

Gettysburg Mine Heritage Tourism Potential: None

No potential.

Site 5GL.2216 Brack Hollow Tunnel ***Project: Basic Inventory***

Historically, prospectors staked the Brack Hollow claim over a vein on Maryland Mountain's east flank, overlooking North Fork of Clear Creek canyon. A mining outfit then bored the Brack Hollow Tunnel into the mountain's base to reach the vein. The tunnel and vein trended southwest. The Josephine Mine (5GL.730) is adjacent and south and the Midas Tunnel (5GL.739) a short distance north. The three form a collective visible from Highway 119, on the canyon's east side. The Brack Hollow is an archaeological example of a tunnel mine, the resource type. All buildings, structures, and equipment were removed long ago, leaving a collapsed tunnel portal and large waste rock dump.

Brack Hollow Tunnel Description

Miners blasted a trench into the mountainside to provide a solid face for the tunnel, and then continued underground along the vein. In 1887, the Gilpin Tramway railroad (5GL.2104.1) was graded through the site, requiring changes. In particular, the grade passed directly in front of the tunnel and was around 8' higher, its fill-bank threatening to block access. The railroad mitigated the access issue by constructing a short bridge in front of the tunnel, allowing miners to pass underneath. When intact, the bridge consisted of timber stringers between log cribbing walls 10' apart and 9' high. The walls have mostly fallen over.

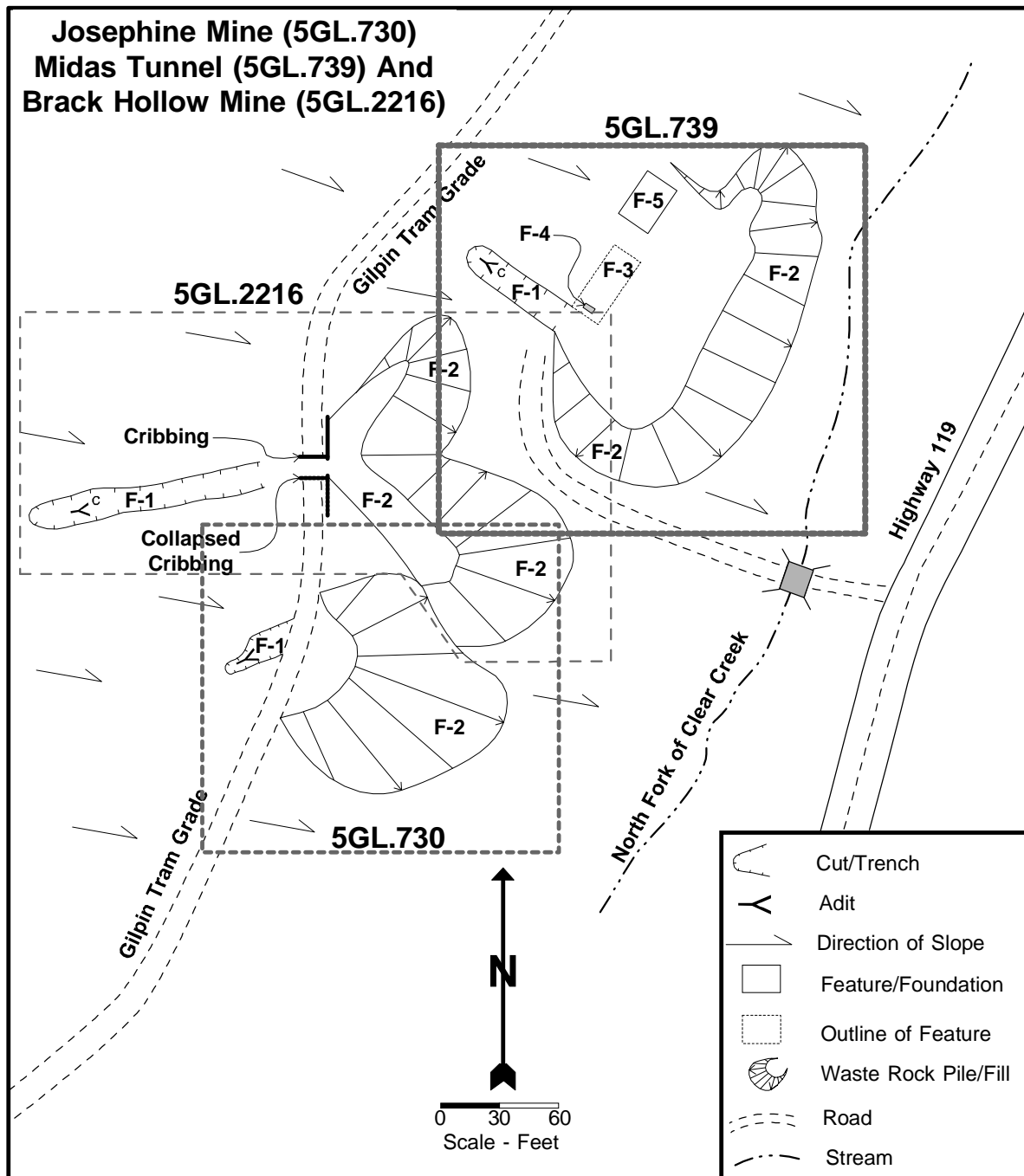


Figure 4.93: Plan view of Josephine Mine, 5GL.730, Midas Tunnel, 5GL.739, Brack Hollow, 5GL.2216.

When developing the underground workings, miners pushed ore cars out the tunnel and underneath the bridge, dumping the contents downslope. Over time, they built up a U-shaped bench of waste rock 72'x180' in area and 15' thick. The center was removed by heavy equipment as low-grade ore in recent decades, creating a semi-circular cut with ragged walls.

At one time, the mine had surface facilities including a blacksmith shop, ore bin, and possibly other structures. Storm runoff flowing down a minor gully washed out evidence of the

shop, while waste rock removal destroyed evidence of the bin. The tunnel portal and dump are presently the only clearly identifiable features.

The site possesses a sparse artifact assemblage of structural materials and blacksmithing refuse distributed around the dump. Cut nails reflect an age range spanning the 1870s and 1880s.

Buried archaeological deposits are unlikely because activity tended not to generate material in volume, which was thrown out onto the ground. Further, the area's steep slopes are not conducive to the accumulation of buried deposits.

Brack Hollow Tunnel Condition and Integrity

The resource is marginally preserved. The tunnel collapsed and is now a subsidence trench, and the eastern toe of the waste rock dump was hauled off as low-grade ore in recent decades. Removal of waste rock created a ragged scar and erased evidence of the mine's ore bin and possibly other features. Erosion also destroyed anything remaining from the blacksmith shop. The site is becoming overgrown with evergreen saplings.

The resource possesses mixed integrity. Without features representing the surface plant, the site lacks aspects of design, materials, and workmanship. But, in an intact setting and complimented by neighboring mines, the site does have integrity of feeling and association.

Brack Hollow Tunnel Significance

The site's principal value is as a contributing element of Maryland Mountain's landscape. The dump is prominent and visible from Highway 119, on the east side of the North Fork canyon. This site, combined with the adjacent Midas Tunnel and Josephine Mine, form a collective reflecting substantial gold production north of Black Hawk. Despite the interesting interface between the railroad and tunnel, the site lacks sufficient integrity for eligibility alone.

Brack Hollow Tunnel Management Recommendations

- Archival research, necessary for interpretation.
- Interpretive signage on Gilpin Tramway grade explaining mine history.
- Rebuild collapsed log cribbing bridge abutment at tunnel portal, imitating the intact north abutment. If the tram grade is to be improved as a recreational trail, the abutment will have to be rebuilt anyway.

Brack Hollow Tunnel Heritage Tourism Potential: High

The site's potential is high because of its visual prominence and location on the Gilpin Tramway grade. The grade's log cribbing crossing over the tunnel area provides an interesting microenvironment.

Interpretive Signage. A simple sign posted on the tram grade can simultaneously identify the Brack Hollow Tunnel (5GL.2216) and Josephine Mine (5GL.730), and mention a few facts about their history.

CHAPTER 5: HISTORIC DISTRICT POTENTIAL

Historic District Overview

Chase Gulch has great potential for designation as a historic district at the National Register of Historic Places level. The gulch could also qualify for less prestigious districts at state and county levels. The National Park Service defines a National Register district as follows:⁵⁷

“A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.

“A district must be significant, as well as being an identifiable entity. It must be important for historical, architectural, archaeological, engineering, or cultural values.

“A district can comprise both features that lack individual distinction and individually distinctive features that serve as focal points. It may even be considered eligible if all of the components lack individual distinction, provided that the grouping achieves significance as a whole within its historic context. In either case, the majority of components that add to the district’s historic character, even if they are individually undistinguishable, must possess integrity, as must the district as a whole.”

In sum, a historic district is a cohesive body of resources unified by place, time, theme, and historical trends. Further, that body must be historically significant. The area within the historic district cannot have been disrupted by substantial modern intrusions, and the district should convey a sense of its past. To contribute to a historic district, individual resources must be sufficiently preserved on an archaeological level or better. Finally, most but not all the resources within the district must be contributing elements.

Chase Gulch and Maryland Mountain’s east flank meet the above qualifications. The area features a concentration of 85 mining resources forming a rural historic landscape in an excellent setting which combines manmade and natural qualities. Three-quarters (66) of those resources contribute to the landscape and one-third (32) are also individually eligible for the National Register of Historic Places (NRHP). A potential district based on landscape must include the concentration of sites and their viewshed for setting. Table 5.1 summarizes the diversity of sites and how many are contributing, while Figure 5.1 illustrates potential district boundaries.

The area possesses an additional attribute in its favor: most of the land is Black Hawk’s with a few individuals owning a handful of private, patented mining claims along the south edge. Consent among a majority of property owners is necessary for district designation, so the fewer parties involved, the easier this becomes. Black Hawk’s property alone might qualify as a district should a majority fail, but many significant and contributing resources do lie on private claims. The following summary details how and why the gulch qualifies.

Potential Chase Gulch Historic District

Historic Theme: The resources clearly convey a main theme of gold mining, 1859-1941. But they also reflect important subthemes.

- Gold mining and Colorado frontier 1859-1866. Some resources date to the 1860s and exemplify mining and stamp milling during Colorado’s earliest years.
- Placer mining. The gulch contains a preserved placer mine and infrastructure.

⁵⁷ National Register Bulletin 15, 1991:5.

- Hardrock mining and prospecting. Most resources portray methods of prospecting and mining.
- Black Hawk as regional milling center. Ruins of five ore treatment mills make Black Hawk's historic role as the region's milling center clear.
- Gold mining 1933-1941. Gilpin County experienced a major revival during the Great Depression, where mining provided vital economic support and employment.

Resource Type and Distribution: Numerous mining and related resources are evenly scattered throughout the gulch, but sparse on upper reaches of Maryland Mountain. Many are visually prominent and anchor the landscape, while others are small-scale with localized presence. A network of wagon roads links principal mines with a main artery on the gulch floor. Gilpin Tramway railroad grade also links mines. Table 5.1 provides a summary.

Significant Resources: Inventory accounted for 85 substantial archaeological resources. Of the resources, 67 contribute to the landscape and 32 are also individually eligible for the NRHP. (Total count was 97, but 12 were small prospects recorded as Isolated Finds for the Land Disposal. Though listed in Chapter 4, they were omitted here). Resources range in age from 1859 through 1930s, representing Gilpin County's span of mining history. In general, 1860s sites are rare and important because they date to Colorado's earliest years.

Table 5.1: Resource Type and District Status

Resource Type	Individual Eligibility	Contributes to Historic Landscape	Noncontributing Not Eligible	Total
Prospect Complex	2	6	8	14
Prospect Adit		1	1	2
Prospect Shaft		3		3
Shaft Mine	4	19	1	20
Tunnel Mine	9	19	2	21
Concentration Mill	5	5		5
Dam (for waterpower)	1	1		1
Placer Mine	1	1		1
Placer Infrastructure	2	2		2
Road	5	6	2	8
Pack Trail			1	1
Railroad	1	1		1
Residential Complex	2	1	2	3
Refuse Dump		1	1	2
Total	32	66	18	85

Landscape Qualities: The landscape strongly conveys a sense of Gilpin County mining through natural and manmade elements.

- Natural elements include third-growth evergreen forest and aspen stands in at-one-time disturbed areas. Riparian habitat on the gulch floor creates a rural mountain feeling. Maryland Mountain is largely unchanged and offers brush and old-growth trees amid granite cliffs, spires, and glaciated rock. Pinnacles serve as a gateway at the gulch's east end while massive Castle Rock marks the west end.
- Manmade elements include doghair pine forest growing in historic clearcuts, as well as the road network, railroad grade, and numerous prominent mines.

Potential District Boundaries: The boundaries encompass:

- Chase Gulch from Black Hawk (east end) to Castle Rock (west end).
- Chase Gulch viewshed, including north flank of Bates and Winnebago hills, and south face of Maryland Mountain.
- South half of east face of Maryland Mountain.

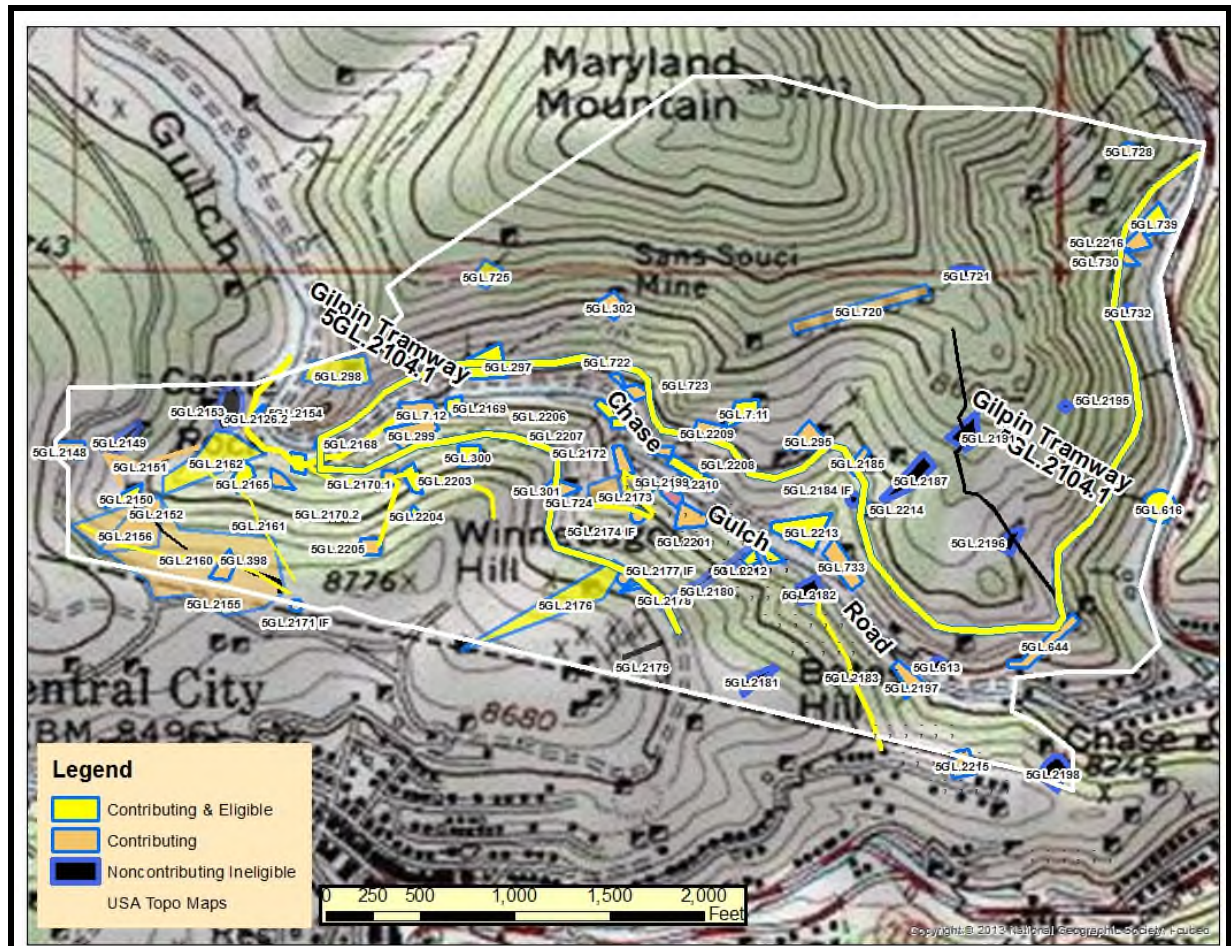


Figure 5.1: In the map, the bold white line outlines a potential historic district. Boundaries are based on resource concentration, historic landscape, and viewshed.

CHAPTER 6: HERITAGE TOURISM POTENTIAL

The City of Black Hawk has an opportunity to be Colorado's first community to develop an entire mining landscape for heritage tourism. Several other municipalities have included mining in their heritage tourism programs (notably Aspen, Breckenridge, and Silverton) but they have restricted efforts to interpreting only a handful of sites. Black Hawk has an advantage in vision, interest, financial resources, and especially ownership over an entire mining landscape. Further, that landscape features an extensive assemblage of important and high-quality sites. Planning and sensitive development could deliver heritage tourists an outstanding experience in recreation, education, and appreciation of Black Hawk and its important history.

Heritage tourism planning might consider easy-to-achieve small-scale projects involving individual sites, as well as a long-term program for greater Chase Gulch and Maryland Mountain. Both the short-term and long-term work can be developed concurrently, to maximize synergies between the two. Ultimately, planning should balance needs of the resources and heritage tourists with Black Hawk's expectations and limitations.

Short-Term Tourism Projects

Short-term projects would focus on preparing and presenting the many individual sites that have good tourism potential. The richest sites possess both interesting histories and archaeological features ready for interpretation, while lesser sites are historically noteworthy but lack sufficient integrity for full interpretation. Site preparation involves further documentation, preservation, and vegetation thinning. Presentation includes assembling quality information about a site, and then offering it to the public. The bullet-points below explain why the actions are suggested, and Table 6.1 ranks sites according to their potential. For more detail regarding any one site, see its description in Chapter 4.

Further documentation: combines detailed recording of site, archival research, and narrative summary. A site's *full* history can only be derived from archival research *and* analysis of material evidence, as both are complimentary and neither is comprehensive.

- Necessary for a quality, permanent record of a site.
- Detailed recording provides a site map and description required for archaeological interpretation.
- Archival research connects people, organizations, and historic events with place.
- Narrative summary produces text ready for multi-use.

Preservation: ensures that sites and their important attributes last through time. Heritage tourism relies on quality sites, and many of those in open space are important enough to warrant preservation for their own sake. Some sites with significant artifact assemblages and buried archaeological deposits either require security measures or may not be appropriate for interpretation.

- Repair and rehabilitation of buildings, primarily roofs and foundations. Must use workmanship and materials consistent with the original structure.
- Stabilization of structures such as rock walls. Must use workmanship and materials consistent with the original. Should be accomplished under supervision.

- Preservation of important features such as blacksmith forges and machine foundations. Involves careful removal of soil, rubble, and vegetation. Requires supervision.

Vegetation thinning: Many sites have been overtaken by young, thick vegetation preventing access, obstructing views, and confounding interpretation. Vegetation and its roots also threaten site well-being by damaging features. Thinning is important to prepare sites for tourism contact, general preservation, and healthy ecosystems evocative of history.

- Remove most vegetation from main portions of sites, and from within structures and building ruins. Caution must be exercised to avoid damaging features. Large trees outside of features can be left to enhance a site's historic feeling.
- Selectively thin vegetation between features, on waste rock dumps, and around site perimeter. Large trees can be left to enhance a site's historic feeling.
- Stumps must be cut to grade to preserve a site's historic feeling, and to minimize tripping hazard.
- Cut vegetation should either be hauled off-site or widely disbursed.

Long-Term Tourism Projects

Long-term projects are greater in scale and scope than preparing and presenting individual sites. Rather, they provide structure and direction for experiencing the area's history in a broad sense. Before settling on specific endeavors, Black Hawk must first set its expectations and decide on the level of effort it is prepared to make to develop heritage tourism in open space. Once a strategy is in place, projects can be identified and prioritized. Following are a few general ideas.

Improve Gilpin County Tramway bed as a recreational and interpretive trail: The railroad grade provides a landscape-level experience with Chase Gulch, as well as direct contact with many important mines. The tram bed itself is also fundamental to the landscape and a potential historic district. Maintaining the bed's historic character is therefore essential, and loss of integrity weakens both tourist experience and district designation.

- Reconstruct collapsed walls using materials and workmanship as in the original.
- If the surface is paved, imitate the existing yellow-brown sandy soil. Strive for minimal change in appearance.
- Narrow sections may have to be widened. Minimize disturbance and scatter excavated material downslope rather than leaving it in pushpiles.
- Thin vegetation, especially doghair sapling thickets, and trim stumps to grade.
- A bridge over Quartz Creek at the dam should appear historic.
- Post thematic interpretive signs at strategic overlooks and important mine sites. See Table 6.1 above for list of sites.
- Post interpretive signs discussing tramway history at entry points.

Table 6.1: Recommendations for Heritage Tourism Potential

OAHP #	Resource Name	Resource Type	Heritage Tourism Potential	Preparation	Presentation
5GL.2104.1	Gilpin Tramway	Railroad	High	Improve as trail. Clear obstructions. Repair wall collapse. Selectively thin vegetation.	Interpretive signs at entry points. Mile markers.
5GL.2213	Bonanza Mine and Mill	Tunnel Mine and Mill	High	Further documentation. Selectively thin vegetation. Stabilize assay shop. Preserve select features. Remove junk.	Interpretive loop trail through site with signs. Public archaeology event.
5GL.2169	Belden Mill	Mill	High	Further documentation. Stabilize northwest corner. Stabilize rear pillar. Clean out rubble. Thin vegetation.	Interpretive sign. Stop on interpretive loop trail with Belden Tunnel and Dam. Public archaeology event.
5GL.616	Golden Gilpin Mill	Mill	High	Acquire, preservation easement Further documentation. Assess, stabilize. Consult with mill expert on running plant. Remove junk.	Interpretive signs. Docent tours, live demonstrations.
5GL.7.12	Belden Tunnel	Tunnel Mine	High	Further documentation. Thin vegetation.	Interpretive signs. Stop on interpretive loop trail with Dam and Mill.
5GL.2168	Dam	Dam	High	None	Interpretive sign. Interpretive loop trail.
5GL.2126.2	Chase Gulch Road	Wagon Road	High	Selectively thin vegetation	None
5GL.2167	Stamp Mill Remnant	Stamp Mill	High	Further documentation. Preserve select features. Selectively thin vegetation.	Interpretive signs. Interpretive loop trail with old Chase Gulch Rd.
5GL.2165	Prospect Complex	Prospect Complex	High	Further documentation. Preserve select features. Selectively thin vegetation.	Interpretive signs. Stop on interpretive loop trail with old Chase Gulch Rd.

OAHP #	Resource Name	Resource Type	Heritage Tourism Potential	Preparation	Presentation
5GL.2162	Robert Ingersoll Placer	Hydraulic Placer Mine	High	Further documentation. Selectively thin vegetation.	Interpretive signs. Stop on interpretive loop trail with Pipeline Bed.
5GL.2161	Robert Ingersoll Placer Pipeline Bed	Pipeline Bed	High	None Hiking-only trail.	Name sign. Segment in interpretive loop trail with Robert Ingersoll Placer Mine.
5GL.2160	Robert Ingersoll Placer Ditch	Water Ditch	High	None	Name sign.
5GL.2211	Aetna Tunnel	Tunnel Mine	High	Further documentation. Thin vegetation.	Interpretive sign. Stop on interpretive loop trail.
5GL.2212	Aetna Shaft	Shaft Mine	High	Stabilize shop building	None
5GL.2210	Workers' Housing	Workers' Housing	High	Further documentation. Selectively thin vegetation. Secure small artifacts.	Interpretive signs on Chase Gulch Rd. Public archaeology event.
5GL.2201	Union Tunnel	Tunnel Mine	High	Further documentation. Evaluate potential.	Name sign at dump toe. Interpretive trail passes dump's toe.
5GL.2200	Chase Gulch Brewery	Workers' Housing	High	Selectively thin vegetation. Stabilize rock walls.	Interpretive sign. Interpretive trail passes site
5GL.2199	Shelby Tunnel	Tunnel Mine	High	Further documentation. Evaluate potential.	Name sign at dump toe. Interpretive trail passes dump's toe.
5GL.2172	Queen of the West Tunnel	Tunnel Mine	High	Thin vegetation on dump.	Name sign. Interpretive trail passes dump's toe.
5GL.2207	Centre Tunnel	Tunnel Mine	High	Further documentation. Thin vegetation. Stabilize rock walls. Clean rubble out of tunnel house ruin.	Interpretive sign. Interpretive loop trail passes by tunnel portal.
5GL.2206	Centennial Tunnel	Tunnel Mine	High	Further documentation. Thin vegetation. Stabilize rock walls. Clean rubble out of tunnel house ruin.	Interpretive sign. Interpretive loop trail passes by tunnel. Public archaeology event.
5GL.297	Alley Mine	Tunnel Mine	High	Further documentation. Thin vegetation.	Interpretive signs.

OAHP #	Resource Name	Resource Type	Heritage Tourism Potential	Preparation	Presentation
5GL.298	Castle Rock Mine	Shaft Mine	High	Further documentation. Thin vegetation.	Interpretive signs.
5GL.300	First Centennial Shaft	Shaft Mine	High	Further documentation. Preserve select features. Thin vegetation. Access trail.	Interpretive signs.
5GL.725	Sarah E. Mine	Tunnel Mine	High	Further documentation. Stabilize buildings. Access trail.	Interpretive signs.
5GL.2152	Oro Mine Pack Trail	Pack Trail	High	Thin vegetation.	Loop trail with Oro Mine.
5GL.2150	Oro Mine	Tunnel Mine	High	Further documentation. Stabilize buildings. Thin vegetation.	Interpretive signs. Stop on interpretive loop trail .
5GL.2151	Oro Mine Road	Wagon Road	High	Thin vegetation. Improve as trail.	Loop trail with Oro Mine.
5GL.2156	Prospect Complex	Prospect Complex	High	Thin vegetation.	Interpretive sign on Oro Pack Trail.
5GL.2170.1	Winnebago Hill Haul Road	Wagon Road	High	Thin vegetation. Ready for use as trail.	Interpretive sign. Segment in interpretive loop trail.
5GL.2170.2	Winnebago Hill Haul Road	Wagon Road	High	Thin vegetation Ready for use as trail	Segment in interpretive loop trail.
5GL.2203	Centre Mine: Midlevel Tunnel	Tunnel Mine	High	Further documentation. Selectively thin vegetation. Stabilize rock walls.	Interpretive sign. Interpretive loop trail passes site
5GL.2204	Centre Mine: Upper Tunnel	Tunnel Mine	High	Further documentation. Thin vegetation. Stabilize rock walls.	Interpretive sign. Interpretive loop trail passes site.
5GL.2173	Virginia Mine Road	Wagon Road	High	Thin vegetation Ready for use as trail	Connector trail from Chase Gulch Rd to Tramway.
5GL.724	Virginia Shaft	Shaft Mine	High	Archival research.	Interpretive sign at site. Access trail from gulch floor through site to Tramway above.
5GL.301	Queen of West Mine	Shaft Mine	High	Archival research.	Interpretive sign on Tramway overlook.

OAHP #	Resource Name	Resource Type	Heritage Tourism Potential	Preparation	Presentation
5GL.299	Ellery Mine	Shaft Mine	Medium	None	Name sign on Tramway overlook.
5GL.7.11	Robert Emmett Shaft	Shaft Mine	High	Further documentation. Preserve select features. Thin vegetation. Access trail.	Interpretive signs.
5GL.733	Road or Elephant Shaft	Shaft Mine	High	Further documentation. Thin vegetation.	Interpretive sign at tunnel house ruin.
5GL.644	Smith Mine	Stope Mine	High	Archival research. Access trail from parking area through site to Tramway above.	Interpretive sign on Tramway overlook and parking area below.
5GL.739	Midas Tunnel	Tunnel Mine	High	Further documentation. Thin vegetation. Parking improvements should avoid dump.	Interpretive signs.
5GL.2216	Brack Hollow Tunnel	Tunnel Mine	High	Archival research	Name sign on Tramway
5GL.730	Josephine Mine	Tunnel Mine	High	Archival research.	Name sign on Tramway.
5GL.2176	Maryland Second Discovery Prospect Complex	Prospect Complex	High	Archival research. Tunnel and dump are on Tramway.	Name sign on Tramway.
5GL.2197	Billings Mine	Tunnel Mine	Medium	None	Name sign at parking.
5GL.723	Centennial Extension Mine	Stope Mine	Medium	Archival research.	Interpretive sign on Tramway overlook.
5GL.2202	Black Quartz Mine	Shaft Mine	Medium	None	Name sign on Winnebago Haul Road.
5GL.2205	Ranney Mine	Shaft Mine	Medium	Thin vegetation for trail	Name sign on interpretive loop trail through site.
5GL.2209	Robert Emmett Mine: Level 1	Tunnel Mine	Medium	None	Name sign on Tramway
5GL.2190	Mary Ella No.2 Mine Road	Wagon Road	High	Improve as trail	None
5GL.2166	Prospect Complex	Prospect Complex	Medium	None	None
5GL.2174	Prospect Shaft	Prospect Shaft	Low	None	None
5GL.2177	Prospect Adit	Prospect Adit	Low	None	None

OAHP #	Resource Name	Resource Type	Heritage Tourism Potential	Preparation	Presentation
5GL.2178	Mine, Name Unknown	Tunnel Mine	Medium	No preparation. Tunnel and dump are on Tramway.	None
5GL.2182	Freedom Tunnel	Tunnel Mine	Low	Thin vegetation for trail	Name sign
5GL.2183	Freedom Tunnel Road	Wagon Road	Medium	Thin vegetation Ready for use as trail to Casey St, Central City	None
5GL.2185	Mine, Name Unknown	Shaft Mine	Medium	None	None
5GL.2208	Robert Emmett Mine: Level 2	Tunnel Mine	Medium	None	None
5GL.2214	Road or Elephant Prospect Shaft	Prospect Shaft	Low	None	None

Develop interpretive loop trails: The north and south walls of Chase Gulch feature networks of historic wagon roads passing through groups of important mines. Segments of original Chase Gulch Road also follow the gulch's south floor where some of the best sites are located. The roads are ready-made recreational trails requiring only inexpensive sapling thinning for use. Additionally, many connect with each other or the Gilpin Tramway, and are ideal for hiking or cycling loops. With nearly uniform treads and rock retaining walls, the roads possess a distinct historic character enhanced by adjacent prospects and mines. The roads bring users into direct contact with important historic sites, which can be interpreted with signage. As with the tram bed, the roads are fundamental to the landscape and a potential historic district. Maintaining their historic character is therefore essential, and loss of integrity weakens both tourist experience and district designation. That stated, however, relatively recent roads can be improved with heavy equipment with no adverse impact.

- Loop trails can be thematic, such as the original Chase Gulch Road highlighting the history of deep tunnels and mills, or the Robert Ingersoll Placer Mine and Pipeline showcasing placer mining.
- Identify potential loops in concert with city planner, trail expert, and historical consultant. Creating GIS maps using existing information is a first step, followed by several hours in the field.

Self-guided tour brochure: a simple pamphlet can feature a brief overview, map of trails and principal sites, and histories of the sites.

Website tour download: a website can be dedicated to Chase Gulch and provide users with materials for self-guided tours. Most materials have already been produced.

- Chase Gulch map showing trails and historic sites.
- Detailed histories of each site.
- Map of each site, interpreting and explaining its archaeological features.
- Historic photos where available.

Docent tours: a docent knowledgeable about Chase Gulch and the histories of its sites can lead tours. Period dress is appropriate.

Smart phone apps: smart phones can provide site histories, historic photos, and interpretive maps of archaeological features. Most materials have already been produced.

CHAPTER 7: RECOMMENDATIONS FOR FURTHER OPPORTUNITY

The Basic Inventory and Land Disposal projects clearly demonstrate that Chase Gulch was an important center of mining and a microcosm of Black Hawk's history. Through both projects, we have identified most principal historic sites, characterized the landscape as a resource in itself, and created a foundation for nomination of a historic district. The information also provides material for heritage tourism. And yet, additional work is necessary to further the area's management, heritage tourism development, and district designation. The following steps may help guide the process, and they assume that tourism and district designation are city goals.

Plan an easy-to-enact short-term program to prepare and present historic sites.

- Draft a list of sites for further documentation, interpretation, and improvement. Candidates can be chosen from Table 6.1, and the list based on accessibility, importance, or historic theme.
- Complete further documentation. The information will be multi-use including interpretation and district designation.
- Create and post interpretive signs, website, or smart phone apps.
- Improve sites with access, vegetation thinning, and preservation needs. Some actions require on-site supervision.

Pursue historic district designation, a multi-year process according to History Colorado.

- Basic Inventory and Land Disposal projects already provide good foundation.
- Further documentation of sites (for tourism) fulfills designation requirement.
- Meet with History Colorado to specify exact steps for designation.

Plan long-term projects and improvements, based on expectations and forecasted use.

- Develop broad-scale interpretive strategy involving trails, multiple historic sites, and methods for presenting the sites to tourists.
- Identify interpretive loop trails at beginning of planning process. Existing wagon roads are ready-made trails. Improve roads with caution, maintaining their historic character and attributes.
- Design self-guided tour with brochures, website, and phone apps.

Newly constructed mine buildings and structures at select sites has great potential for education, and can enhance the feeling and experience of the area.

- Choose sites lacking important archaeological features (list can be provided).
- Buildings should be complete with walls and roof.
- Design, construction methods, and materials should be the same as the historic period.
- Obtain and install historic machinery where appropriate. Hoists and compressors come available at times. Windlasses and horse whims used at shafts are fairly easy to imitate.

Preserve the historic character and feeling of Chase Gulch and Maryland Mountain. Major alterations and modern disruptions erode tourist experience and could threaten historic district designation.

- Avoid major construction projects on the gulch floor.

- If a pipeline is buried in Chase Gulch Road, remove excess soil and do not leave pushpiles typical of heavy equipment. Restore surface to original.
- If Chase Gulch Road is paved, imitate the existing gravel surface in color and texture.
- Improvement of Gilpin Tramway should maintain historic character. Collapsed wall sections should be rebuilt with historic methods and materials. Minimize earthmoving. Pavement should imitate the existing gravel surface in color and texture.
- Selectively thin doghair sapling evergreen groves along gulch's south floor. This will improve visibility of historic sites, make way for trails, and promote healthy ecosystem.

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