United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Wagon Wheel Gap Fluorspar Mine and Mill
Other names/site number: 5ML.252
Name of related multiple property listing:
Mining Industry in Colorado Multiple Property Documentation Form
(Enter "N/A" if property is not part of a multiple property listing

2. Location

Street & number: 1 Goose Creek Road
City or town: Creede State: Colorado County: Mineral
Not For Publication: n/a Vicinity: X

3. State/Federal Agency Certification

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

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

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

___national ___statewide _X__local

Applicable National Register Criteria:

_X_A ___B _X_C _X_D

Holly Kathryn Norton March 4, 2019
Signature of certifying official/Title: Deputy State Historic Preservation Officer **Date**

History Colorado, Office of Archaeology and Historic Preservation
State or Federal agency/bureau or Tribal Government

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

Signature of commenting official: **Date**

Title : **State or Federal agency/bureau or Tribal Government**

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:	X
Public – Local	
Public – State	
Public – Federal	

Category of Property

(Check only **one** box.)

Building(s)	
District	X
Site	
Structure	
Object	

Wagon Wheel Gap Fluorspar Mine and Mill
The Mining Industry in Colorado MPDF
Name of Property

Mineral County, Colorado
County and State

Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
15	5	buildings
1		sites
9	2	structures
		objects
25	7	Total

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

INDUSTRY/Extractive Facility
INDUSTRY/Manufacturing Facility
DOMESTIC/Institutional Housing

Current Functions

(Enter categories from instructions.)

VACANT/Not in use
DOMESTIC/Institutional Housing

7. Description

Architectural Classification
(Enter categories from instructions.)
LATE VICTORIAN
NO STYLE

Materials: (enter categories from instructions.)

Foundation	Stone, concrete, wood
Walls	Wood, metal, paper
Roof	Metal, asphalt

Principal exterior materials of the property: Wood

Narrative Description
(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraphs

The Wagon Wheel Gap Fluorspar Mine and Mill is located eight miles southeast of Creede, Colorado, in Mineral County. It is one-and-a-half miles south of the well-known geographic landmark of Wagon Wheel Gap. The district sits on the eastern edge of the Creede Caldera, which is one of a chain of collapsed volcanoes that erupted more than 30 million years ago in the San Juan Mountains.

Goose Creek Road, a graded dirt road from Wagon Wheel Gap at Colorado State Highway 149, provides the only vehicular access to the mine and mill district and to the neighboring 4UR Resort. The road travels a little more than a mile south from Highway 149 and then bends to the east at the resort entrance, before proceeding south along the former miners' housing area for about 1200'. The road then turns to the east to cross a bridge over Goose Creek to the mine.

General Description/Setting

The district contains the overall mine site and includes the mine, mill complex, miners' housing area, mule barn, and remnants of two aerial trams and a dirt road connecting the mine and mill complex (see Sketch Map A-1). The historic district measures 105 acres and encompasses an area that extends 2900'east-west at its widest point, and approximately 3500' north to south.

The mine is located on the steep west-facing slope located east of and above the mill. The mine historically included working levels ranging up to 9171'. The mill complex sits below the mine area, on a bench above Goose Creek, at an elevation of 8530'. Just below the bench, a pump house is partially submerged in the waters at the edge of the creek. At the south end of the district, a magazine and loading dock are located about 600' south of the mill complex, along the mine's access road. The mule barn, which sheltered the mules (and possibly horses), used for transporting mine materials, is located near the north end of the district. It sits approximately 870' to the north of the mill complex, in the flood plain on the east side of Goose Creek. The creek, which is a tributary of the Rio Grande River, separates the industrial (mining and milling) operations from the miners' housing. The residential area is located along the strip of land between the mine access road and the west side of Goose Creek.

While historic photographs and numerous stumps on the hillside suggest that a large number of trees were removed while the mine was operating, the spruce-fir forest is re-growing and overtaking much of the older mining areas on the slopes. Cave-ins are located at the top of the mining area and near two of the lower tunnels. At the base of the mine, the ground surface has been heavily disturbed in the floodplain area located between the mill complex and the mule barn. This disturbance was probably the combined result of flooding and reclamation of a pond (or ponds; date of work unknown) that is no longer extant in this area.

General Ownership and Development

The first miners, who eventually created the American Fluorspar Mining Leasing and Transportation Company, opened the mine in 1913, and constructed the mill in 1918. They also constructed the two aerial trams and the miners' housing. Colorado Fuel and Iron (CF&I) of Pueblo purchased the mine in 1925 and ran the operation until 1950.

CF&I installed most of the extant improvements around the mill and also made changes to the mine. During CF&I's operations, the mine had no shafts. All ore was extracted through hillside tunnels. Most of the ore was transported underground to the Main Haulage Level via raises between the development levels, reducing the need for the two aerial trams that connected some of the mining levels to the base of the mountain. By the 1940s, CF&I stopped running the aerial trams and solely relied on trucks to haul the ore. The trucks travelled a dirt road that makes switchbacks across the mountainside.

CF&I anticipated re-opening at a later date after the 1950 closure and left much of the mill equipment in place, but the mine was never started back up. As a result, the district's resources

are relatively unchanged since 1950. They form a cohesive mining and milling system and retain a high degree of historic integrity.

The owners of the adjacent 4UR Resort purchased the mine and mill complex from CF&I through several transactions between 1982 and 1986. The resort owners adapted the miners' residences to staff housing and have mostly left the mining and milling resources unaltered.

Summary of Contributing Resources

There are twenty-five contributing resources in the district. The entire historic district counts as one (contributing) site, with various features located within the site, including ruins and foundations of numerous buildings and structures. Fifteen relatively intact buildings and nine structures also contribute to the district. They are listed in the summary chart below.

Summary Chart of Contributing Resources

Resource Name	Resource Type	Construction Information: builder; date(s)
Mine and Mill district (including housing)	Site	American Fluorspar Company and CF&I; 1913-1950
Outhouse at Intermediate Level of the mine	Building	American Fluorspar Company; 1917
Shed at Third Level of the mine	Building	CF&I; 1940
Loading Dock at Third Level of the mine	Structure	CF&I; 1940
Hoist with shed	Building	American Fluorspar Company; pre-1925
Shed at Main Haulage Level of the mine	Building	CF&I; 1925
Aerial Tram Towers (3) along Alignment A	Structures (3)	American Fluorspar Company; ca. 1913-19
Aerial Tram Tower (1) along Alignment B	Structure (1)	American Fluorspar Company; ca. 1913-19
Magazine B along the road to the south	Structure	CF&I; post-1940
Loading Dock along the road to the south	Structure	CF&I; post-1940
Mine Access Road	Structure	CF&I; post-1925
Mule Barn	Building	CF&I; ca.1927
Administrative Building at Mill Complex	Building	CF&I; post-1926, expanded 1936
Compressor and Shop Building	Building	CF&I; ca. 1932
Small Shed associated with the	Building	CF&I; ca. 1932

Resource Name	Resource Type	Construction Information: builder; date(s)
Compressor and Shop Building		
Shower/Change Building	Building	CF&I; post-1926
Magazine A at the Mill Complex	Structure	Unknown; post-1926
Concentration Mill	Building	American Fluorspar Company and CF&I; 1918, ca.1925, 1944
Pump House	Building	CF&I; post-1927
Bunkhouse	Building	American Fluorspar Company; ca. 1913-23
Spruce Tree Cottage	Building	American Fluorspar Company; ca. 1913-23
Shed at Spruce Tree Cottage	Building	American Fluorspar Company; ca. 1913-23
Creekside Cottage	Building	American Fluorspar Company; ca.1913-23

Summary of Non-Contributing Resources

There are seven standing buildings/structures that do not contribute to the district. These resources were all constructed or substantially altered after the period of significance (1913-1950). They include two fuel tanks that were installed at some time after the late 1980s and are used for current operations of the 4UR Resort, three of the six residences in the miners' housing area (which are currently used as staff residences for the nearby 4UR Resort), and two outbuildings associated with the non-contributing residences. They are listed in the summary chart below.

Summary Chart of Non-Contributing Resources

Resource Name	Resource Type	Construction Information: builder; date
Fuel Tanks (2)	2 Structures	4UR Ranch; after 1985
The Willows	Building	4UR Ranch; ca.1990s
Manager's House (aka Swenson House)	Building	4UR Ranch; 1999
Garage for the Manager's House (aka Swenson House)	Building	4UR Ranch; 1999
Goose Hall	Building	American Fluorspar Company; ca. 1923, altered 2002
Goose Hall Shed	Building	4UR Ranch ; ca. 2000

Narrative Description

CONTRIBUTING RESOURCES

The district contains three distinct areas: the mine, the mill complex, and the miners' housing areas. The mine features will be described first, followed by the mill complex and the housing area.

Mine (Photo 1- overview)

Five mining levels are still evident on the steep slope above the mill. Beginning at the highest, the five levels, with their elevations (in feet) and development dates, are as follows:

Surface Level	9171	pre-1925
Wilson Level	9083	ca. 1913-16
Intermediate Level	8933	ca. 1917
Third Level	8779	ca. 1940s
Main Haulage Level	8607	1925

A sixth level, called the Collins Level, was located at 8573' and first developed in 1913. Work ended on the Collins Level by the 1930s. It is no longer extant on the surface and is probably buried under the tailings from the Main Haulage Level.

At some time after 1926, cave-ins of the underground workings occurred above the Surface Level and near to and below the Third Level between the tram lines. The cave-ins are fenced off for safety.[1]

The following features are all part of the mine area:

Surface Level – pre-1925, Site Feature (elevation 9171'), (Photo 2; Historic Photo H2)

Initial exploratory cuts into the surface (which are in the cave-in area) were in place by 1926. The sparse cultural remains are located in a re-forested area, and are about 100' down slope from a very large (estimated from aerial photographs to be approximately 115' x 780') cave-in and slope slump. The cultural remains consist of two concentrations of milled wood boards with round nails. Each concentration measures about 20' x 30'. The eastern concentration contains a few larger dimension timbers (8" x 10"), some of which have been notched. This concentration also appears to have greater depth, and it is located at the elevation given for a mine in the CF&I files, suggesting it may have been a portal. No artifact scatters were located and only a few areas appear to have been shallow ore dumps, suggesting the material may have been removed through a lower level or trucked down the hill.

[1] Engineer Jaxon (first name not given in the records) recorded "A hole in the ground" located above the Main Haulage tunnel in his survey notebook for CF&I on September 6, 1930. His notes suggest the cave- in occurred on September 5. CF&I archives MIN0387A Folder 16.

Alterations
The historic photograph (Photo H2) does not show any buildings at this level in 1926. The few surface remains, which are dwarfed by the large cut and cave-in, and remaining waste rock clearly indicate there was mining activity at this level.

Wilson Level – ca.1913-16, Site Feature (elevation 9083'), (Photos 3-4; Historic Photo H2)
The Wilson level has been partially reforested. It was initially developed sometime between 1913 and 1916.[2] Waste rock is spread across the area covering about 250' x 160'. Two sections of cribbing constructed of four or five courses of logs with shallow saddle notching are in the waste rock. Above the waste rock is a sparse scatter of artifacts, including a concentration of about ten blasting powder cans, a piece of rail, and fragments of a water pipe. The former mine portal is not clearly evident, but a possible building foundation is evident from a rectangular shallow depression measuring about 6' x 8' and containing six to eight milled board fragments, three pieces of a cast iron stove, and wire rope fragments. A separate heap of logs and a few notched end timbers appear to have been piled from a structure. Part way down the slope, and hidden in the trees, are the remains of the foundation of the tram terminal for Tram A, which connected the mine to the bottom of the slope. (The Tram A alignment's standing structures are described later in this section.) The foundation of the terminal measures 10' x 12' and has three to four courses of unpeeled logs with beveled ends forming the crib foundation walls. Two bull wheels, each measuring 6' in diameter, are slightly offset from each other and are fixed on axles that are bolted into large timbers. A guide sheave is located in an opening in the wall on the down slope (west) side.

Alterations
It is likely that the tram terminal is the building seen in the 1926 historic photograph of the mine (Photo H2). While the building is no longer standing, the large waste rock pile, the remaining mining-related artifacts and the remnants from the tram terminal house clearly represent mining operations and contribute important information about the workings at this level, related to mining operations and transport of the ore via the tram.

Intermediate Level – ca. 1917, Site Feature with Outhouse (1917) (contributing building), (elevation 8933'), (Photos 5-7; Historic Photo H2, Sketch Map C)
The Intermediate Level was worked until the early 1940s. It has an intact outhouse (contributing building), an ore dump area measuring approximately 200' across and 275' down slope, a concentration of milled wood boards located near what may have been the mine portal, and remnants of three buildings. The location of the mine portal is not readily apparent, but it may be a depression measuring roughly 10' in diameter and containing six to ten larger dimension timbers (8" x 10"), some of which are notched. This possible portal location is between the three building remnants and the ore dump area, and is located at the elevation given for a mine in the CF&I files. A rail line for ore carts, measuring about 70'long, connects the buildings area to the

[2] An annotated mine map shows work done at the Wilson and Intermediate Levels between 1916 and 1920. Comments written on the map indicate the map was drawn in about 1920. Steelworks of the West archives 57.3.

ore dump. After CF&I ceased work at this level, the portal was used only for ventilation of the other tunnels.

Except for the outhouse, the buildings are all in ruins. The extant outhouse measures 4'-6" x 6'-3". It sits on milled wood boards. Its walls are made of vertical boards. It has a side-hinged door made of the same wood boards as the walls. The door would not open, so the interior of the outhouse was not visible. A few of the wood rafters remain that once supported a shed roof. The outhouse has not been altered but it is deteriorating, as the roofing is no longer present.

The other building remnants are wood frame with no surviving wall cladding in the areas where partial walls are still standing. The partial walls are milled wood boards nailed to wood framing. Some of the walls have vertical wood boards and some have diagonal wood boards. The remnants include a partially standing building, with no visible foundation, of undetermined function, measuring 5'-6" x 14'. Another partially standing building with no discernible foundation, measuring 8' x 25', may have been a blacksmith shop, because there is a small stove still located inside, and a hood from a possible forge lying on the ground just outside the building. The stove inside the building is made of a metal drum, with legs attached to elevate the drum above the floor, and a stove pipe. The third building remnant is built into the hillside and has only one portion of one collapsed wall sitting on a foundation made of logs. A boiler and a steam powered hoist remain within the foundation of this ruined building. A guide sheave is attached to one of the foundation logs. The hoist is aligned with the tram towers located down slope for Tram A, which connected the Wilson Level to the lowest level, and is described later in this section. The hoist may have provided auxiliary power for Tram A, or for loading ore from the Intermediate Level onto tram buckets, but its function is not totally apparent. This building ruin is located higher on the hill than the rest of the building ruins and a remnant of an ore cart rail line descends down the slope about 10' towards the rest of the complex. A portion of a tram bucket is located on the ground, down slope from the building. Remnants of a tram tower are located approximately 15' west (down slope) from the hoist building and are aligned with the hoist. The tram towers are described in a separate paragraph.

Alterations
The building seen in the 1926 historic photograph of the mine (see Photo H2), whose function is unknown, is no longer standing (removal date also unknown), but the extant large waste rock pile, the outhouse, the remnants of other buildings, including a possible blacksmith shop, and the steam-powered hoist clearly represent mining operations and contribute important information about the workings at this level related to mining operations and transport of the ore.

Third Level – ca. 1940s, Site Feature with Shed (1940) (contributing building) and Loading Dock (contributing structure), (elevation 8779'), (Photos 8-10; Sketch Map B)
The Third Level has a mine portal with an adjacent, small, corrugated-metal-sided and -roofed shed (contributing building) that measures 6 ½' x 7'. The shed sits on wood beams and has a wood frame door on the east side. The stiles and rails of the door are intact, but the sheets of corrugated tin that covered the door are no longer present. Much of the door material is missing,

but otherwise the shed is in good condition. The portal measures 7' wide and is constructed using cap-and-post timber sets with horizontal timber stringers. The entry has been filled in with dirt and is covered with chicken wire. The slope above the tunnel has caved in, extending approximately 10' back from the entrance. An ore car tram rail exits the portal and runs approximately 250' across the top of the ore dump pile to a loading dock located next to and above the mine access road, and associated with the road, where ore would have been loaded from the ore dump pile onto trucks. An empty small wood storage box measuring 3' long x 4'wide, with a metal hinged lid and one metal side, is partially exposed in the road bank near the loading dock.

A second set of tram rails branches off from the mine portal to the north end of a partially collapsed building with a side-gable roof. Remnants of the roof include wood rafters and wood decking. The building measures 40' x 10' and is wood frame. The remaining standing walls are made of horizontal wood boards. The north side has tarpaper on the wall. A tram tower from Tram B is located about 10' west of and slightly down slope from the portal. The tram tower and alignment are described in a separate paragraph.

Alterations
There are no known alterations. The layout of this level, with an intact mine portal and ore transportation resources (ore rail line, truck road, loading dock) clearly illustrate workings at this level related to both mining and ore transportation.

Hoist with Shed – pre- 1925, Contributing Building (Photo 15)
A hoist and shed is located between the two tram alignments and about 200' west of the Third Level. Since the hoist is located in the fenced off area, within 35' of a caved-in tunnel, it was viewed at a distance for safety reasons. It does not appear to have an associated pile of waste rock, so it is likely the hoist was used for access to the underground workings but not for mining. It has a cribbed log foundation supporting a two-post gallows headframe with diagonal bracing. A small rectangular shed sits at the base of the head frame. The shed walls are vertical wood. It was not clear from the viewing distance if the vertical wood walls are planks or boards. A square opening is in the west wall. The hoist and shed are present in the earliest known photographs of the mine, and dates to before CF&I acquired the property in 1925. It does not appear to have been altered and appears to retain good historic integrity.

Main Haulage Level – 1925, Site Feature with Shed (1925) (contributing building), (elevation 8607'), (Photos 11-12; Historic Photo H2; Sketch Map D)
This level was first developed by 1925. It connects to the mill via rail track extending out of the Main Haulage Tunnel on a trestle attached to the top level of the mill. The access road crosses just above the Main Haulage Level. An ore dump platform, a circular water tank foundation measuring 17' in diameter, and a wood frame shed (contributing building) measuring 16' x 10'are located along the road. The ore dump platform is made of milled wood boards placed on wood timbers, and is 12'-6" x 6'. Ore was emptied off the platform to the short railroad track located below it. The short track connects with the track coming out of the Main Haulage Level

portal and into the mill. The water tank foundation is located above the road. It has a poured concrete base and is topped by a platform made of milled wood boards. This foundation is the only use of concrete observed on the mine above the Main Haulage Level.

The shed sits about 90' north of the rail line connection to the mill. It has no foundation and is constructed of vertical milled wood boards. It has a wood door made of vertical wood boards on the south wall. The roof has rafters indicating it once was a shed roof. The shed does not appear to have been altered but it is deteriorating. Another rail line runs in front of the shed and across the top of an ore dump area measuring approximately 200' x 100'.

Alterations
Since this Level operated until the mine closed in 1950, it retains much of the features in use when the mine was open, including the ore transport system, with the road, trestle, and ore rail into the mine's tunnel. The water tank is not present, but the concrete foundation with the wood deck illustrates the diameter and shape of the tank, which is visible in historic photographs.

Aerial Trams – ca. 1913-19, (Photos 13-14)
Two aerial tram alignments are evident from remaining towers. Both trams were in place before CF&I purchased the mine in 1925, but it is not clear the exact date of construction of the trams. The State Mine Inspection Reports filed from 1916 to 1919 occasionally reference aerial trams, but do not give specific enough information about them to determine which of the two trams they refer to. The material remains suggest these were Bleichert tramways, which were the more common tramway designs in Colorado by the 1890s.[3]

Tram Alignment A – Three Contributing Structures (Photo 13)
Tram Alignment A is the northern of the two alignments. It connected the Wilson Level to the lowest level of the mine, where the ore was loaded into wagons or ore carts for transfer to the railroad depot. The lowest level at the time of Alignment A's construction was the Collins Level (which was developed before the concentration mill was constructed and is no longer extant). Historic survey records indicate the Collins Level was located at an elevation of 8753', so the alignment would have risen at least 330' in elevation over 1350' on the ground. The tram connected levels that were developed between 1913 and 1924. Since it is aligned to connect with the oldest level (the Collins Level), it is probably the older of the two tram alignments. (The top of the mill is at approximately 8,610', which is about140' lower than the Collins Level.) Operations at the Wilson Level continued into the 1920s, but it is not known if the level was worked in the 1930s. The tram would have been discontinued when the Wilson Level development ended.

The surviving remnants of this alignment include remains of the foundation of the tram terminal located at the Wilson Level (described previously) and three towers. The towers are through

[3] Jay Fell and Eric Twitty, "Mining Industry in Colorado" National Register Multiple Property Documentation Form (Washington, D.C. , Department of the Interior, 2008) on file with History Colorado Office of Archaeology and Historic Preservation (OAHP), Denver, Colorado. Section E, Page 145.

towers supporting double-rope trams. They were built using mostly logs with some 6" x 8" milled wood posts used for bracing. The towers were constructed on crib box foundations that included a mix of logs and milled wood. Two of the towers are within the fenced in areas that contain caved-in land and were inaccessible. The foundation of the accessible tram tower on Alignment A is located at the edge of the Intermediate Level. It measures 14' wide x 12' long. It retains most of its foundation, bracing post, and vertical posts, but the horizontal wood pieces are broken and deteriorating Steel shoes that are typically on the cross arms are no longer present. This tower still has the lower sheave, which measures 12" in diameter and 14" wide. The sheaves would have facilitated the passage of the traction lines. The other two towers appear from a distance to be in about the same condition as the accessible tower. At least one of the two inaccessible towers retains a sheave. None of the towers have been altered. Although the towers are deteriorated, they retain sufficient integrity to indicate the type of tower construction and the materials and methods employed to build the towers. Their in-situ locations clearly define the tram's alignment.

Tram Alignment B – One Contributing Structure (Photo 14)
Tram Alignment B is the southern of the two tram alignments**.** It connected the Intermediate Level to the Mill at about the Main Haulage Level, a drop of 326' in elevation over approximately 1105' on the ground. No surface evidence remains of the tramway connection to the mill, probably because of later work on the Main Haulage Level. It is not clear when this tram was constructed, but State Mine Inspector reports suggest it may have been built as early as 1918. The tram operated until the 1940s, when CF&I discontinued use of the tram and transitioned to truck transport.

One tram tower and part of the cable remain from this alignment. The relatively intact tower is located at the edge of the Third Level. A cable from this tower lies on the ground, partially exposed, and extending uphill roughly along the route of the tram alignment into the ore dump of the Intermediate Level. The tower is a through tower supporting a double-rope tram. The tower was built using mostly logs, with some 6" x 8" milled wood posts used for bracing, on a crib box foundation that included a mix of logs and milled wood. The foundation measures 16' x 12'. The tower retains most of its structure and still has two sheaves, which measure 12" in diameter and 14" wide. Steel shoes that are typically on the cross arms are no longer present. Although the tower is deteriorated, it retains sufficient integrity to indicate the type of tower construction and the materials and methods employed to build the tower. The orientation of the tower and the general orientation of the cable contribute important information toward determining the alignment of the tram.

Magazine B – post-1940, Contributing Structure (Photo 31)
An 8'x10' explosives magazine with poured concrete walls and a gabled corrugated metal roof is located along a spur of the access road, about 600' south of the mill complex. Since it is located along the road, it is likely the magazine was constructed in the 1940s, when CF&I employed trucks in lieu of the aerial trams. The magazine has a side-hinged flush metal door on the north

side, which faces the road. The door is accessed via a large poured-concrete step. No alterations to the original structure are evident and the structure retains historic integrity.

Loading Dock – post-1940, Contributing Structure (Photo 31)
A loading dock constructed of milled wood boards is located along the road, about 65' northeast from Magazine B. The structure measures 15' x 20' and has low wood board walls on three sides to form the bin, which presumably held road fill and surfacing (such as gravel). Since it is located along the road, it is likely the loading dock was constructed in the 1940s, when CF&I employed trucks in lieu of the aerial trams.

The wood boards forming the loading dock are beginning to deteriorate, but the structure retains original materials and form.

Mine Access Road – post-1925, Contributing Structure (Photo 9)
The mine access road is not a formally designed roadway. It is a nominally graded dirt road measuring approximately 10' to 12' wide at the mill complex, and becoming progressively narrower and less level as it switchbacks across the steep slope above the mill complex to climb up to the Third and Intermediate Levels of the mine. From the mill complex, the road travels 1050' south while ascending 50' to the first switchback. At this point, a narrow spur measuring 8' to 10' wide extends about 950' to the north to connect to the Main Haulage Level, (the spur was re-graded in 2018, and can be seen in Photo 11) while the main road bends back to the east-northeast and travels for about 1500' while climbing 200'up the slope, until it reaches the Third Level. The road then bends sharply to the south for a 100' climb over approximately 650', until it reaches a switchback, where a second narrow spur is located. The main road turns north-northeast and rises 55' along the 800' route to the Intermediate Level. The second single-track spur is not travelled much and has some vegetation growing in the track. It is less than 5' wide and might be more accurately characterized as a path. It travels 650' south to a switchback where it turns and extends about 1450' to the north while climbing 175' to access the Surface Level and associated cave-in area.

Alterations
The single track was re-graded to allow the owners vehicular access to the top of the mill. The remainder of the road route appears to have been little changed, is clearly defined and retains historic integrity.

Mule Barn – ca. 1927, Contributing Building (Photo 30)
The mule barn is located approximately 870' north of the mill complex. It measures 20' x 35'. It is located within the floodplain of Goose Creek, which flooded in 1927, so it is likely this barn was constructed after the flood. Extensive re-grading in the area between the mill complex and the mule barn has altered the ground surface and the topography, but the barn was probably near the route of the ore cart rail tracks (no longer visible in this area) for a surface tram, which was installed in 1917. Mules pulled small mine cars along the track from the mill to a railroad loading station at Wagon Wheel Gap. Mules also hauled the carts of ore along tracks within the mine

tunnels. The barn is a rectangular wood frame building on remnants of a poured concrete foundation. It has a gabled corrugated-metal roof. The walls are cladded with vertical split logs. Side-hinged Dutch doors made of vertical wood boards are on each of the gable ends. A square opening is located above the east door, presumably for ventilation. The barn was probably used until the 1940s, when CF&I replaced most of the mules in the mines with battery-powered locomotives and began using trucks to haul ore. No alterations to the original building are evident. The building retains historic integrity.

The Mill Complex (Photo 1 overview, Sketch Map D)

The complex includes a concentration mill, three support buildings with an associated shed, a magazine (called Magazine A), fuel tanks mounted on supports (modern, in use and non-contributing), a pump house, and the area formerly occupied by a sawmill.

The support buildings located to the north of the mill are an administration building and a compressor and shop building with an associated shed. Magazine A and the two fuel tanks are also north of the mill and are located to the west of the machine shop. A shower/change building is situated south of the mill. These improvements sit on a relatively level area measuring 400' x 160'. The buildings align with the orientation of the concentration mill, at about 90 degrees to the toe of the slope of the hill where the mining activities took place. The mill was initially constructed in 1918, and was altered in later years by CF&I. All of the other buildings and the magazine were constructed at some time after 1925 by CF&I. The fuel tanks supply the vehicles at the 4UR Resort.

The former location of the sawmill is west of the mill. Just below the sawmill location, partially submerged in the waters of Goose Creek, is a (no longer functioning) pump house.

Administration Building – post-1926 (expanded 1936), Contributing Building (Photo 16)

Constructed by CF&I after 1926, this one-story building has a rectangular form and a front-gable corrugated-metal roof. It sits on poured concrete piers and timbers. It has wood board walls with vertical boards on the south wall and horizontal boards on most of the remaining walls. Tar paper covers some of the walls. The building originally measured 20' x 33'. In 1936, a 32'-long addition extended the building to the north, resulting in the current 20' x 65' configuration. The building housed administrative offices, storage for core samples, and a parts warehouse. All windows are wood. The main entrance side faces south and has a three-paneled wood door with four-light glazing in the upper half, and a four-light fixed window to the east. The west side has a set of double wood doors with five panels in each leaf, two six-light fixed windows and two two-light fixed windows. The north side has no openings. The east side has two four-light fixed windows, and a boarded over rectangular opening.

Alterations

The building is not in current use and while some of the exterior cladding is deteriorated and the east opening has been boarded over, the building does not appear to have been altered since the

addition in 1936. The shape, form, location, and materials are relatively intact, and the building retains its historic integrity.

Compressor and Shop Building – moved onsite ca. 1932, Contributing Building (Photos 1 and 17)

This tall one-story building has a rectangular form and a side-gable corrugated-metal roof with a round pipe extending from the east slope of the roof. It measures 58'x 30' and sits on a poured concrete foundation. The wood framed walls are clad in corrugated metal. A shed-roof shelter supported by square wood posts extends from the south side. The building housed a large air compressor and the blacksmith shop. All windows are wood, double hung and six-over-six-light. The front, or west, side has two windows and a boarded-up opening that was probably a third window. A small metal pipe extends from the wall next to the boarded-up opening. A pair of side-hinged wood doors is also on this side. The doors are made of vertical wood boards and have double-z bracing. The north side has a boarded over window opening and a second window that has been partially boarded over. A vent pipe extends from the ground next to the north wall. The south side has two windows and a wood paneled door. The east side has four partially boarded-up windows with most of the glazing intact. A vent pipe extends out from the east wall and bends 90 degrees up between the east wall and the adjacent small shed. An air tank is located outside the building and just to the east of the northeast corner of the building. What appears to be a drill sharpening machine stands outside the building about 10' southeast of the southeast corner. Machinery is still located inside the building, including a large diesel-powered engine and a Sullivan air compressor at the north end of the building, a lathe, and a forge which is located at the south end of the building and is vented by the pipe on the east slope of the roof. The building, whose original construction date is unknown, was moved onto the site from CF&I's Orient Mine, which was located east of Villa Grove, Colorado and was closed down in 1931, suggesting the building was placed on the site in about 1932. The building is now used for storage.

Alterations

The shed roof extending to the south of the building may have been added by CF&I in the 1930s or 1940s after the building was moved onsite. No other alterations to the exterior of the original building are evident. The shape, form, location, and materials are relatively intact, and the building retains its historic integrity.

Small Shed (associated with Compressor and Shop Building) – ca. 1932, Contributing Building (Photo 17)

A small building (10' x 15') with poured concrete walls is located approximately 18" away from the Compressor and Shop Building on the rear (east) side. The building has a corrugated-metal shed roof and some corrugated-metal sheathing on the upper part of the walls on the north and south sides. The shed probably housed a function related to the shop, such as storage of flammable materials. It has large garage-door-sized openings on the north and south walls. The north opening has a pair of wood side-hinged doors. These doors each have a wood board frame

with a wood board X brace. Corrugated metal is attached to the frame on the interior of the doors. Two sheets of corrugated metal and three wood boards partially cover the south opening.

Alterations
The main form and materials of the shed are unaltered. There may have been doors on the south opening, but they are no longer in place.

Shower/Change Building – post-1926, Contributing Building (Photo 18)
Constructed by CF&I after 1926, this one-story building has an L-shaped form and a gable corrugated-metal roof. The building housed a shower and change room for employees; it measures 45' x 35' overall. A metal pipe extends from the roof ridge on the eastern short axis of the L. The southwest corner has a poured concrete foundation. The building has horizontal wood board walls that were at one time covered with tar paper that has mostly worn away. The west side has four sets of wood, side-hinged, double doors made of vertical wood boards. In three of the four pairs, each leaf has double-Z bracing. The north side has a rectangular unglazed window opening. The east side has a wood door, three boarded-up window openings, a square (unglazed) window opening and a partially-boarded glazed window opening on the south side of the eastward projection. The south wall has a boarded-up rectangular window opening. The building is now used for storage.

Alterations
The west side of the building was originally used as a garage. By the 1940s, the entire building was referred to as the shower building. The building has lost most of the tar paper covering, glazing is missing from some of the windows, and the foundation at the south end appears to be failing. The shape, form, location and materials are relatively intact, and the building retains its historic integrity.

Magazine A – post-1926, Contributing Structure (Photo 19)
A magazine measuring 12' x 16' was constructed after 1926 by CF&I to store explosives. It is located 50' west of the Administrative Building. It is constructed of poured concrete and has one six-light metal sash fixed window on each of the east and north walls, a boarded up opening on the west wall and a flush metal door on the south wall. It has a shed roof made of concrete. It is empty and appears to be unaltered. The shape, form, location and materials are relatively intact, and the structure retains its historic integrity

Concentration Mill – 1918, ca. 1925, 1944, Contributing Building (Photos 22-29; Historic Photo H-1)
Constructed in 1918, the Mill is a heavily timbered, wood-frame building constructed in four levels. It measures 118'x 96'and contains much of the equipment that was in use when the mill was shut down in 1950. Unlike most gravity-fed mills that are typically built into a hillside, this building is located on flat ground at about 8530' in elevation. It is oriented generally north to south with a trestle extending eastward at a right angle from the upper floor to connect to the Main Haulage Level of the mine.

The mill is built on a poured concrete foundation and mostly has horizontal milled-wood board walls that had been covered with tar paper (now worn away in many places). Some portions of the mill have corrugated-metal siding, including the boiler and machine rooms and the remains of the walls enclosing parts of the trestle. Most of the building is supported by 8" x 8" and 10" x 10" timbers and beams and secondary uprights and cross pieces. It is approximately 80' tall at its highest point.

The mill has a complex roofline, reflecting the size and space requirements of the milling equipment in the building. The major roof form is a large shed roof with a long roof sloping down to the west side. A shed-roofed section extends above the east edge of the main roof to meet the trestle. This section was added in about 1925. Three taller sections with shed and gable roofs extend up from the main roof. A shed-roofed projection on the west side steps down from the main roofline. A one-story and a two-story projection on the south side have shed roofs sloping to the south. This projection was added in 1944. The roof line on the north side is a complex mix formed by the combination of the partially-collapsed gable-roofed one-story boiler room, and the one-story shed-roofed engine room and a small one-story northward projection with a shed roof. Most of what remains of the roof is the wood decking, with some rolled asphalt. The current owners have recently installed water and ice shield material on some of the roofs. Corrugated-metal roofs are on the boiler room, the machine room, the remains of the roof over the trestle, and the two-story projection on the south side. One tall flue pipe from the boiler and one small pipe extend from each of the north and south slopes of the boiler room and another vent pipe extends from the south part of the boiler room roof. The two tall flue pipes are loosely tethered with historic guy wires.

Window and door openings were placed to provide light, ventilation, and access where needed inside the building. All of the windows have been boarded over with horizontal wood boards, probably when the mill closed in June, 1950. A few boards have been removed from a few of the windows in the recent years to provide some interior light. Many of the windows still have glazing and are primarily six-over-six-light double-hung windows with wood sashes. There are at least twelve boarded-up windows on the west side, twenty-two boarded-up windows on the north side (including five in the north walls of the trestle enclosure), eleven boarded-up windows on the east side and at least eighteen on the south side (including four in the south walls of the trestle enclosure). Two large door openings with overhead (upward-lifting) vertical board doors are located at ground level on the north and south walls. These doors originally accommodated the rail and ore car traffic. Ore cars on rails passed through these doors to go through the mill to collect processed material for waste dumping and for shipment. Two other similar large openings with overhead (upward-lifting) vertical board doors are located on the north and south sides of the 1944 addition constructed at the west side of the mill to accommodate new bins for the concentrates and the waste material. Another large opening (alteration date unknown) located on the south wall is covered with sheets of corrugated metal. A rectangular opening in one of the corrugated metal sheets is covered over with wood boards. Person-sized door openings (all boarded over) are visible at various heights on each of the walls. One door opening is located at

the first floor on the south wall and three other boarded-up doors are located at higher points. A large rectangular gap is open in the south wall near the top of the building that appears to be a wall failure. The west wall has two oversized door openings that have been boarded over on the first floor at the boiler room that provided access to the coal bin located immediately to the west. The north side has a partially boarded-over metal flush door and a door made of vertical wood boards on the first floor to access the boiler room. A boarded-up wood door accesses the north wall of the machinery room area, and at least three other boarded-over door openings are on the upper levels of the north wall of the mill.

The trestle (Photo 24) extends approximately 100'from the east wall of the mill to the Main Haulage Tunnel. It is supported by seven bents that are each made up of three piers that are individually anchored on poured concrete footing blocks. The piers are made of 10" x 10" and 10" x 12" timbers. The bents are spaced 14' or 15' apart. Timber beams and 3" x 10" boards form X-bracing and sills. The stringers for the decking appear to be 3" x 10" or smaller boards (this area was not safe to access). The trestle supports two wood decks. The upper deck is partially enclosed by corrugated-metal walls with a gable roof. The exposed portion of the deck is severely deteriorated and has remnants of ore car rail track. The lower deck, which still has rail track and an ore car, connects to a side rail that transported material from an ore dump located to the south of the trestle. The lower deck is also severely deteriorated. A small enclosure, with corrugated-metal walls and a door on the east side, sits on a cribbed lumber foundation slightly above and at the east end of the lower deck. Remnants of concrete footing blocks located parallel to and south of the trestle base suggests another structure (possibly an ore receiving bin) had been previously located south of the existing trestle. This structure may have been removed in 1944 concurrent with the additions to the west and south sides of the mill.

The mill was powered by two steam generated coal-fired boilers manufactured by Hendrie and Bolthoff, a Denver-based company (Photo 25). Located in the boiler room at the north end of the first floor of the mill, and rated at 115 horsepower each, the boilers produced steam to drive a Murray Corliss engine and a Skinner steam engine, which are located just south of the boilers. The Murray Corliss engine's drive shaft has a huge 8'-diameter drive pulley with grooves to accommodate seven runs of 11/4"-diameter hemp rope (Photo 26). The ropes extended 800' to drive equipment at upper levels of the mill. The Skinner Engine has two pulley wheels to drive 6" and 12" belts that power the ore refining equipment (Photo 27). Radiators are at various locations in the mill, suggesting the steam also provided heat. All of the power generating system, including the rope, is still in the mill. The boilers are set within field-built brick foundations. A large coal bin is located outside the west side of the boiler room. The mill was always powered by the boilers and never connected to electrical lines.

Water for the milling process came from the water tank that was situated on the foundation located just above the mill at the Main Haulage Level.

The mill machinery was inventoried in the CF&I records and is mostly readily identifiable, although manufacturers' nameplates are missing on most pieces. Each level of the mill housed

equipment to perform a particular aspect of the ore processing and concentration. The equipment named in the CF&I inventories is still in the mill building unless otherwise noted in the following description of the process.

The process begins at the top of the mill to take maximum advantage of gravity. Ore was dumped from the trestle onto a grizzly, which is basically a grate. Smaller ore slipped through the two inch gaps between the grizzly's slats to fall down to an ore bin, and then onto a picking belt (a conveyor belt), where employees picked off pieces of waste rock and high grade fluorspar and transferred them to either a waste bin to be trucked away, or to a jaw crusher (the CF&I inventory indicates this was a Universal jaw crusher) and then into a high grade concentrate bin that loaded into trucks for shipment. The "unpicked" ore fell from the picking belt into a second ore bin, joining the larger pieces that had not passed through the grizzly and had slid down the grizzly to a second jaw crusher, (the CF&I inventory indicates this was a Telsmith jaw crusher) before ending up in the second ore bin. Only one of the two jaw crushers (it is not clear which one) was observed in the mill.
Ore from the bin was passed through a roll crusher to reduce the material to less than 3/4" and was then lifted up to three trommels on the third level via a belt bucket elevator. A trommel is basically a rotating drum with a screen (Photo 28). Ore was mixed with water to pass through the trommel screens. The largest trommel screen is 7/8" and the smallest is 1/8". Ore that had not succumbed to the first roll crusher and did not pass through the 7/8" screen was dropped through a second roll crusher and returned to the trommel via the belt bucket elevator where it was sent through the first trommel screen again and then sorted by size as it passed through the smaller screens of the second and third trommels.

The water-logged ore concentrate dropped from the trommels to the second level of the mill to a specific set of four-compartment Harz-type jigs, based on the size of the ore (Photo 29). Using a pulsing action, the jig separated the fluorspar from the waste rock. Fluorspar is denser than waste rock, so it would sink to the bottom and the waste would be siphoned off. Waste rock was discharged into an Akins spiral classifier located on the first level, for dewatering, discharged to a waste bin, and then loaded into a truck at the south side of the mill for disposal. A second Akins spiral classifier was used to dewater the material that contained some of the mineral, but not a high concentrate of fluorspar, returning the solids to the milling circuit via the belt bucket elevator and the water to the trommel level. High concentrate fluorspar was discharged from the jigs to a Dorr rake classifier located on the first level to be dewatered. The final concentrate was then dumped into a bin and loaded onto trucks on the south side of the mill for transport to the railroad depot at Wagon Wheel Gap.

Alterations
The trestle was constructed by CF&I, in 1925, to access the ore coming from the Main Haulage Level tunnel. It is likely that the trestle construction removed evidence of the former connection to Tram B. By the 1940s, CF&I had extended and enclosed the upper deck of the trestle and constructed an addition on the east side of the mill to connect to the trestle enclosure. That addition is the highest and eastern most section of the mill, and is roofed with a shed roof. The

enclosure of the trestle and the addition to the mill probably related to the changes in the 1940s, when much of the ore was transported via truck on the mine access road, which was higher than the Main Haulage Level.

By the mid-1940s, CF&I used trucks for all transport. The one-story and the two-story shed-roof projections on the west and south side were added in 1944 to accommodate new bins for the concentrates and the waste material that could be easily loaded into the trucks. It is possible the new bins replaced other bins that were supported by what are now remnants of concrete footing blocks located parallel to and south of the trestle base. The current owners have recently installed water- and ice-shield material on some of the roofs. It is assumed the openings were boarded over when the mill closed.

The mill has remained idle since it closed in 1950. CF&I anticipated re-opening the mine and mill when economic conditions warranted it. The company left much of the mill equipment in place, leaving an almost intact representation of the milling process used in 1950. Changes to the building all occurred while the mill was in operation and reflect milling operations (1918-1950) during the period of significance While some of the exterior of the mill has deteriorated, the basic form and materials remain on the exterior as they were in 1950, and the interior, with much of the machinery still in place, has a very high level of historic integrity.

Former Sawmill Location – pre-1926, Site Feature (Photo 21)
The sawmill is visible in historic photographs taken in 1926 (see Photo H2). It is located just west of the mill. It is not known when the sawmill was removed. Currently the sawmill area is a level expanse measuring 210’ x 80’. Remnants of a wood loading dock (16’ x 8’) and the remains of a vertical steam-powered engine (on a 3 ½’ x 6’ poured concrete foundation) are extant. No other surface artifacts were visible.

Pump House – post-1927, Contributing Building (Photo 20)
The Pump House is located on the east bank of Goose Creek. The building is partially submerged in the Creek and is close to a state of collapse. Assuming the pump house would not have survived the Goose Creek flood of 1927, it is likely the pump house was constructed sometime after the flood. It measures 36’ x 18’ and has a wood board gable roof. The walls are made of horizontal wood boards. A partially collapsed door opening with a wood door is on the south side. The door is made of vertical wood boards with a z-brace. The north end has a large opening. Two metal water pipes extend eastward from the east roof slope, presumably to carry water to (an undeterminable location within) the mill complex. Remnants of pumping machinery are still inside the building. The waters of Goose Creek partially inundate the machinery. While the building is severely deteriorated, its original form and purpose are clearly evident, and the location and the remaining equipment inside the building provide information about how water reached the site.

Miners' Housing (Photo 32 overview)

The American Fluorspar Company and CF&I constructed housing for the miners in a linear alignment between the west side of Goose Creek and Goose Creek Road. The housing area was converted into staff housing when the adjacent 4UR Resort acquired the property in the late 1980s. The resort owners updated the four historic houses and added two new residences and a garage in the 1990s. Four of the historic residences are extant. The housing area now has six residences, two sheds and a garage located in a north-south linear alignment between the road and the west bank of Goose Creek.

Alterations in General

All of the historic buildings were altered after the period of significance. They received new horizontal wood lap siding and roof materials in the 1990s and 2000s. Most of the buildings also received new windows and doors as part of the work done in the 1990s and 2000s. While no specific documentation survives of the original historic materials, the 4UR Resort Ranch Manager, who worked on updating some of the homes, reported that the horizontal wood lap siding used on the shed located behind the Spruce Tree Cottage was the siding previously used on the houses. The replacement wood siding is generally consistent with (but not identical to) the historic materials, and the windows and doors are mostly installed within original openings. The general original forms and roof shapes of the contributing historic buildings are unaltered. The buildings remain in their original locations, in a linear alignment of housing along the road.

Bunkhouse – ca.1913-23, Contributing Building (Photo 39; Historic Photo H2))

Originally used for the miners at the American Fluorspar Mining Company, the building measures 29' x 45' and was constructed sometime between 1913 and 1923. It is a one-story building with a rectangular form and a modern standing-seam metal roof that flares out to protect porches that run along the full length of the east (front) and west (rear) sides of the building. Three square brick chimneys extend from the roof ridge. The house sits on a concrete block foundation which was installed after a flood of nearby Goose Creek in 1927 cut under the southeast corner foundation. The building has horizontal wood lap siding with corner boards. The front and rear sides of the building are very similar. Both sides have a porch with a wood deck and square posts supporting the roof. Three doors with wood screen doors opening onto the porch are evenly spaced across each side, and there are three one-over-one-light double-hung windows on each of the two sides. The north and south ends each have two one-over-one-light double-hung windows. Miners occupied the building until the mine closed in 1950. The land was acquired by the adjacent 4UR Resort in the late 1980s. Resort staff currently live in the building.

Alterations

The current wood siding was probably applied in the early 1990s and the metal roof is a relatively new application from the last ten years. All windows and doors have been replaced. Windows are metal or vinyl clad. Doors are composite materials or vinyl. The building remains in its original location, contributing to the linear alignment of housing. It retains its historic form and design and sufficient historic integrity to contribute to understanding of the miners' residential area.

Spruce Tree Cottage – ca. 1913-23, Contributing Building (Photo 36)
This Late Victorian-style house dates to before 1923, when its footprint is shown on a map from the American Fluorspar Company. It has a rectangular form and a front-gable roof with a small shed-roofed addition on the rear (east). It measures 24' x 43' and is one story. The roof has asphalt shingles. A remnant of a square brick chimney extends from the roof ridge. Walls are clad in horizontal wood lap siding with corner boards. The dwelling appears to have a poured concrete foundation. The front faces west and has a door with a wood screen door protected under a small gable-roof extension. A small carved wood sign, located next to the door, says "Spruce Tree Cottage." There are two double-hung one-over-one-light windows at the first story and an historic small six-light fixed wood window in the gable peak on the front (west) side. The north side has three one-over-one-light windows, of which two are double-hung and one is single-hung. The east side has the small shed-roofed enclosure and a rear porch located under the same shed roof supported by square wood posts on a wood deck. A door with glazing in the top half at the south side of the enclosure and two double-hung one-over-one-light windows on the east side open onto the porch. The south side has three one-over-one-light double-hung windows. The yard around the house is surrounded by a wood fence with widely spaced dog-eared pickets. Resort employees currently live in the building.
Alterations
The current siding and windows were probably installed between 1990 and 2005. All doors and windows are metal or vinyl replacements, except for the small six-light fixed window within the gable end on the front. The date of the small shed-roofed enclosure on the rear is unknown. The shingle roof was probably installed between 1990 and 2005. The building remains in its original location, contributing to the linear alignment of housing. It retains its historic form, design, and association with the mine operations. It retains sufficient historic integrity to contribute to understanding of the miners' residential area.

Shed at Spruce Tree Cottage – ca. 1913-23, Contributing Building (Photo 37)
A 7' x 8' shed sits in the southeast corner of the Spruce Tree Cottage yard. It has narrow horizontal wood lap siding with corner boards and a side-gable roof with asphalt shingles. It has rectangular openings on the south and north walls. A side-hinged wood board cover is at one of the openings. The shed is not in use. The 4UR Guest Ranch Manager, who has worked on updating the homes, reported that the narrow horizontal wood siding used on the shed was the siding previously cladding the houses on staff row. It may be the only remaining historic siding within the miners' housing area. The shed retains its historic materials, form, and design.

Creekside Cottage – ca. 1913-23, Contributing Building (Photo 35)
This one-story house has an L-shaped footprint and measures 32' x 42' overall. It has a hipped roof that extends to a shed roof on the rear to cover what was probably originally a porch on the main part of the house and which is now enclosed, and a hipped roof on a rectangular shaped extension to the north. The roof is asphalt shingle and has exposed rafters at the eaves. There are square brick chimneys extending from the center ridge of the main part of the house and from the addition. The dwelling has horizontal lap wood siding and corner boards and sits on a poured

concrete foundation. All of the windows have wood sashes. The front faces west and has a group of four six-over-six-light double hung windows and a wood door with wood screen. Over the entrance is a small gabled pediment. A wood carved sign stating "Creekside" is located over the door. The south side has a pair of four-over-four-light double-hung windows, a pair of one-over-one-light side sliding windows and a five-paneled wood door. The east side has two fixed four-light windows and a window opening that has been boarded up. The north side has a pair of four-over-four-light double hung windows and a single four-over-four-light window. 4UR Resort staff members currently live in the building.

Alterations
The wood siding was probably installed in the late 1990s to early 2000s. The date of the porch enclosure at the rear is unknown. The building remains in its original location, contributing to the linear alignment of housing. It retains its historic form, location, association and design. It retains sufficient historic integrity to contribute to understanding of the miners' residential area.

NON-CONTRIBUTING RESOURCES

The following non-contributing features were constructed or considerably altered after the period of significance.

Mill Complex

Fuel Tanks – post 1985, Two Non-Contributing Structures (Photo 19)
There are two fuel tanks (modern and in use) mounted on metal supports located between the Magazine A and the Administration Building. The tanks are non-contributing because they were constructed well after the period of significance and their function is not related to the mine.

Miners' Housing Area

The Willows – ca. 1990s, Non-Contributing Building (Photo 38)
Constructed in the 1990s, this one-story building with a rectangular form measures 49' x 33'. It has a side-gable roof that flares out to protect porches that run along the east (front) and west (rear) sides of the building. The roofing is asphalt shingle. The building's general form mimics the historic bunkhouse that is located to the south of this building. It has horizontal wood lap siding with corner boards and sits on a poured concrete foundation. The porch floors sit on concrete piers and are a wood composite material. Porch supports are square wood posts. The front side has a composite door and a wood screen door, and three one-over-one-light windows. A carved wood sign saying "The Willows" is located next to the door. The north and south sides each have three one-over-one-light windows. The east side has two one-over-one-light windows and a composite door. The Willows is currently a residence hall for the 4UR Resort Staff. It is

non-contributing because it was constructed after the period of significance and the function of the building is not related to the mine.

Manager's House (aka Swenson House) – 1999, Non-Contributing Building (Photo 34)
Designed by Boulder design firm Silverman Design, this one-and-a-half-story house (48' x 70') was constructed in the miners' housing area in 1999 for the 4UR Resort Manager's family. It is rectangular in form and has a side-gable asphalt shingle roof with a front-gable porch across part of the front, or west, side. A small cross-gable addition extends to the east. A gable roofed dormer with a four-light window is on the west roof slope. It has vertical wood siding and sits on a poured concrete foundation. There are four metal sash side sliding windows on the west side and a door with a metal screen door. The north side has three metal single light windows. The south wall has two groups of three-over-three-light windows. The east side has a door and a pair of doors, and one each of a three-light, a two-light and a single light window. A two-light window is in the south wall of the east projecting extension. The rear yard is enclosed by a low wood fence with widely spaced pickets. The dwelling is non-contributing because it was constructed after the period of significance.

Garage for the Manager's House (aka Swenson House) – 1999, Non-Contributing Building (Photo 34)
Also designed by the same firm as the associated house, Silverman Design, the garage (44' x 33') was constructed in 1999 for the 4UR Resort manager's family. Located across the driveway and to the north of the main house, the garage is a one-story building and was designed to look like a barn. It has a front-gable roof with a shed-roof extension to the west. The roof has asphalt shingles. There is a gable-roofed cupola at the roof ridge. The walls are horizontal wood siding with corner boards, sitting on a poured concrete foundation. There are four six-light windows on the east side. The south side has an overhead metal garage door, a door, and a large side sliding wood door. The garage is non-contributing because it was constructed after the period of significance.

Goose Hall – ca. 1923, remodeled 2002, Non-Contributing Building (Photo 33)
Constructed in approximately 1923 by the American Fluorspar Company, this house was extensively remodeled in 2002. It is a one-story, hip-roof, rectangular building with a modern standing-seam metal roof and horizontal lapped wood siding with corner boards, sitting on a poured concrete foundation. It measures 27' x 59'. Rafter tails are exposed under the eaves. All windows and doors are replacements of presumably wood sash windows and wood doors. Windows are vinyl clad and the doors are fibercore. The front faces west and has a non-historic low wood deck with a two rail enclosure that wraps around to the south side of the building. The west side has three one-over-one-light windows, two fixed-light windows in non-historic window openings, a door with a screen door, and a small carved wood sign stating "Goose Hall". The south side has a door located off the wrap-around deck, under a non-historic small shed roof. The south side also has a two-light window and a single light window. The east side has two two-light windows, a single light window, a group of three one-over-one-light windows and a single one-over-one-light window. The north side has two one-over-one-light windows. 4UR

Resort staff members live in the building. The dwelling is non-contributing because the amount and prominence of alterations, including the metal hipped roof, new window openings, and the installation of the deck have noticeably reduced the historic integrity of the building.

Goose Hall Shed ca. 2000 Building (Photo 40)
A corrugated metal storage shed is located about 20' east of Goose Hall. It measures 12' x 18'. It is rectangular in plan and has a front-gable corrugated metal roof with a pair of side hinged wood doors on the south side. The doors are made of vertical wood boards with double-z braces. It is used for storage. Since it is believed to have been constructed ca. 2000, it is considered non-contributing.

INTEGRITY

The Wagon Wheel Gap Fluorspar Mine and Mill is comprised of four property types as defined in the Multiple Property Documentation Form entitled *Mining Industry in Colorado.*[4] The property types are: Hard Rock Mine–Tunnel Mine; Ore Concentration Facility–Concentration Mill; Aerial Tramway, and; Mining Settlement and Residence-Worker Housing.

All of the four property types have integrity of location, setting, feeling and association, as they have not been moved, their surroundings are intact, and all of the elements complement each other as a complete mining complex that includes raw ore production, ore transportation, ore processing, and miner housing. The district has integrity of design, in that the surviving physical elements clearly illustrate the mining operation and processes. While a few of the buildings have been added on to or rehabilitated, they mostly retain their original design, and the alterations made within the period of significance tell the story of the evolution of the mining complex. The remnants of the aerial trams and the design of the mill illustrate the technology in use at the time of operation. Workmanship is evident in features such as the elaborate trestle extending from the fluorspar mine to the mill . Evidence of the original building materials are prominent throughout the district. The mining landscape includes extensive use of large timbers and large locally harvested logs. Within the mill, the machines used to process the ore are all in place and intact. The archaeological deposits that may exist in the housing area are expected to retain integrity of materials, as there has been very little ground disturbing activity in the housing area. Overall the district has a very high level of integrity.

[4] Jay Fell and Eric Twitty, "Mining Industry in Colorado" National Register Multiple Property Documentation Form (Washington, D.C. , Department of the Interior, 2008) on file with History Colorado Office of Archaeology and Historic Preservation (OAHP), Denver, Colorado.

8. Statement of Significance

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

[X] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.

[ ] B. Property is associated with the lives of persons significant in our past.

[X] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

[X] D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

[ ] A. Owned by a religious institution or used for religious purposes

[ ] B. Removed from its original location

[ ] C. A birthplace or grave

[ ] D. A cemetery

[ ] E. A reconstructed building, object, or structure

[ ] F. A commemorative property

[ ] G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance
(Enter categories from instructions.)
_INDUSTRY_____
_ARCHITECTURE
ENGINEERING_____
_ARCHAEOLOGY/ Historic Non-Aboriginal

Period of Significance
_1913-1950_____

Significant Dates
_1918_____
_1925_____

Significant Person
(Complete only if Criterion B is marked above.)
___N/A_____

Cultural Affiliation
___N/A_____

Architect/Builder
__American Fluorspar Company_____
__Colorado Fuel & Iron Company_____

Statements of Significance

Summary of Statements

The Wagon Wheel Gap Fluorspar Mine is a representative moderate-scale industrial mining and milling complex from the principal period of hard-rock mining in Colorado as defined in the Multiple Property Documentation Form (MPDF) entitled *Mining Industry in Colorado.*[5] The mine includes four property types that are defined and discussed in the documentation form (Hard Rock Mine – Tunnel Mine; Ore Concentration Facility – Concentration Mill; Aerial Tramway; Mining Settlement and Residence-Worker Housing) that meet Criteria A, C, and D for inclusion in the National Register of Historic Places at the local level of significance. The district is significant under Criterion A for Industry for its association with fluorspar mining in the state, Criterion C for Architecture/Engineering as an intact and excellent representative of mining architecture and engineering, and Criterion D for Historic Non-Aboriginal Archaeology for the district's likely ability to yield important information about the lifeways of mining workers.

Criterion A- Industry

Under Criterion A, the district is significant at the local level in the area of Industry for its strong association with the mining of fluorspar in Colorado. The period of significance is from 1913 to 1950, beginning with the initial development of the mine and ending when the mine closed. The mine provided the Colorado Fuel and Iron Company (CF&I) with fluorspar, a material essential to the manufacture of steel, and became part of CF&I's holdings in a manner typical of the steel company's vertical integration structure. For most of its life, the mine was the primary supplier of fluorspar to CF&I.[6] A significant date for this Criterion is 1925, when CF&I purchased the mine and mill.

Criterion C- Engineering and Architecture

The district is significant under Criterion C at the local level in the areas of Engineering and Architecture as a good representation of a moderate-scale industrial mining and milling complex from the principal period of hard-rock mining in Colorado, as defined by the *Mining Industry in Colorado* MPDF.[7] The period of significance begins in 1913 with the beginning of mining practices and the district's development and ends with 1945, by which time the extant buildings and layout was complete. A significant date for this Criterion is 1918, when the mill was constructed.

Criterion D - Historic Non-Aboriginal Archaeology

The district is significant under Criterion D in the area of Historic Non-Aboriginal Archaeology because the site offers extensive opportunities and high potential for additional meaningful

[5] Fell and Twitty.
[6] Lee Scamehorn, *Mill and Mine*: The CF&I in the Twentieth Century (Lincoln, Nebraska:University of Nebraska Press,1992) pp. 137,159.
[7] Ibid.

information currently located in sub-surface remains in the miners' housing area. Archaeological deposits in the housing area could provide important information to contribute to our understanding of the life of the workers there. The period of significance begins when the first housing could have been constructed in ca. 1913 and ends in 1950, concurrent with the closing of the mine.

Narrative Statements of Significance

Criterion A-Industry

The fluorite in fluorspar is used as a flux for smelting steel, and in the production of certain glasses, ceramics and enamels. CF&I used fluorspar as a flux. When iron and coke are heated to create steel, the flux reduces the melting point of the steel slag, allowing lime and other materials to blend into the slag to absorb impurities in the mix. Fluorspar is particularly effective in dissolving unwanted silica.

While fluorspar has been identified in more than forty mining districts in Colorado, the major producers in the state are located in Wagon Wheel Gap, Jamestown in Boulder County, Brown's Canyon in Chaffee County, and Northgate in Jackson County. CF&I initially acquired fluorspar from the mines in Boulder County until the Wagon Wheel Gap mine opened in 1913. From that point on, the mine was CF&I's only fluorspar supplier. In 1924, the steel company leased the mine. In 1925, CF&I purchased the mine, guaranteeing control over production of the flux.

By the early 1900s, CF&I was the largest steel manufacturing company in the western United States, and the largest employer in Colorado. CF&I owned over sixty coal mines, iron ore mines, manganese mines, and quarries for limestone and dolomite, and it was the largest private property owner in Colorado. The fluorspar mine was part of CF&I's business strategy wherein the company owned or controlled all aspects of steel production, such as the mines that produced the iron and coal, the railroads that transported materials, and the electrical plants that provided the power. Wagon Wheel Gap Mine was CF&I's only fluorspar mine and the company's sole source. It held a competitive advantage over the handful of other fluorspar producers in Colorado because it was the only one with a readily accessible railroad for transport.

CF&I closed the fluorspar operation in 1950 because cheaper prices could be obtained in Mexico. Company officials thought they would re-open the mine at some point in the future, which resulted in the intact mill that is standing today.

Criterion C- Engineering and Architecture

The mine contains the character-defining mine elements for a moderate scale industrial mining and milling complex as discussed in the *Mining Industry in Colorado* MPDF.[8] These elements include the mine, aerial trams, the mill, mill complex, explosives magazines, and worker housing.

[8] Fell and Twitty.

The mine elements retain a high level of integrity and are readily recognized and interpreted. The mining levels are clearly visible from the mill and are easily identifiable as the source of the ore processed in the mill. The mine's Main Haulage Level maintains a direct connection to the mill via the trestle extending from the mill and into the Main Haulage Level tunnel. Two tram alignments connecting to the mining levels on the slopes above the mill are good representations of the typical means used to transport ore to the mill. Remnants survive from the aerial tramways connecting the mine and mill complex area, further strengthening the relationship between the two. The remains of both alignments include towers and the terminal foundation for one tram, and are sufficient to exhibit the design of the tower and the routes of the alignments. The dirt road that replaced the trams for transport is intact and illustrates the route the trucks used to transport ore.

The Mill is a typical and representative ore concentration mill from the first ten years of the twentieth century. It is one of the few remaining concentration mills in Colorado that contains much of its original equipment.[9] It is a multi-level mill that processed ore through a series of operations utilizing gravity to move the materials from one stage to the next with the final metal recovery taking place at the lowest level of the mill. The architecture of the mill conforms to the processes that took place within the mill, stepping gradually down to the ground level. The mill contains equipment integral to the process, including a jaw crusher, trommels, jigs, and classifiers, all positioned to refine the ore in an efficient order. The mill also contains the boiler and machines required to power both the mill and the surrounding buildings in the mill complex.

The ancillary buildings in the milling complex, which housed administration, blacksmith and machinery shops, and a shower room, were typical of a mine complex and contribute to the understanding of the mine and mill processes. The blacksmith and machinery shop still contains original equipment, including a large diesel-powered engine, a Sullivan air compressor, a lathe, and a forge. Two explosive magazines offer evidence of the necessary blasting materials.

The housing area illustrates the layout and location of a miners' residence area and contains a mix of multi-unit and single-family-unit housing for single and married miners, reflecting the typical working population at a mine. Residences were located away from the industrial activities, along Goose Creek. The residential area reflects the mining company's efforts to attract and keep workers at this remote location, particularly during the harsh winter months. While the individual residences have been somewhat altered, they still illustrate the scale and design of typical miner housing provided by the mining company.

Criterion D- Historic Non-aboriginal Archaeology

As noted in the *Mining Industry in Colorado* MPDF, worker-housing areas offer a high potential to be eligible under Criterion D because they often possess numerous resources (i.e., building

[9] Jonathon C. Horn, "Sound Democrat Mill and Mine and Silver Queen Mine" National Register Nomination. Washington, D.C., Department of the Interior, (2015). P18 of Section 8. On file with History Colorado OAHP.

platforms, privy pits, and refuse dumps) with buried archaeological remains. Archaeological excavation would seek to recover data from these resources that answer research questions about the lifestyles, social structures, age and ethnicity of workers, as well as the presence of families and women – all topics that are under-reported in mining-related studies.[10] Typical questions would include what foods were available and eaten at the site; how do the recovered material remains illustrate the economic status of the residents; what evidence is there of women living in the camp; what activities can be assigned to gender; and what do the surviving ethnically-associated artifacts illustrate about the ancestry and cultural affiliations of the residents? Investigation could also identify other residences that no longer are standing.

With the possible exception of the installation of a few wood picket fences and utility lines, it is unlikely that much ground-disturbing activity have occurred in the areas surrounding the extant historic houses since 1950. As a result, it is likely that sub-surface cultural deposits remain undisturbed and will have good context even if the deposits are shallow.

Historic Background

The history of the Wagon Wheel Gap Fluorspar Mine begins over thirty million years ago, when at least fifteen volcanoes slowly built up and collapsed into a landscape known today as the San Juan Mountains of southwestern Colorado. The Mine is at the edge of one of the volcanoes – the Creede Caldera – where boiling hot temperatures located relatively close to the earth's surface create hot springs bubbling up through faults. As the hot water travels along fractures in carbonate rock, the minerals in the rock dissolve, creating metallic ores and minerals, including fluorite (also known as calcium fluoride, or CaF_2), that fill the porous rock as the water cools. Fluorspar is the ore primarily containing fluorite, but the two terms are often used interchangeably.

Fluorite crystals occur in a range of colors. Dark purple or violet crystals are easily confused with purple quartz (called amethyst), which is commonly found in association with gold and silver veins in the hard rock country of the San Juan Mountains. One of the wealthiest mining claims in the Creede Mining District was named the Amethyst (located in 1891), after the quartz located near the veins.

About ten miles south of the Amethyst, W.D. Wilson and William Bader thought they had located purple quartz on the slopes above Goose Creek, a tributary of the Rio Grande River near Wagon Wheel Gap. They filed their Sierra Vista claims in 1909, but they never patented their claims.

The same thermal activity that formed the fluorspar deposits on the slopes east of Goose Creek brought tourists to the nearby Wagon Wheel Hot Springs Resort on the west side of the creek (now known as 4UR Ranch, 5ML.22; eligible to the National Register per Colorado SHPO).

[10] Fell and Twitty.

Three prospectors laid claim to the hot springs in 1872, and formed the Wagon Wheel Gap Hot Springs Company in 1876 to develop a resort. The resort was soon bought out by a partnership, known as the Wagon Wheel Gap Improvement Company. Ellwood Bergey, the resort manager, planned for a new road to connect the resort to the depot at Wagon Wheel Gap. He hired a local engineer to design the road. The engineer, named Shrive B. Collins, grew up in nearby Del Norte and graduated from the Colorado School of Mines in 1901.

More than one story accounts for how Collins discovered the fluorspar deposits on the hill above Goose Creek. He may have identified the mineral while working on the resort's road in 1906 and 1907, but done nothing about it at the time, as he was occupied as the Mayor of Creede and as a U.S. Deputy Mineral Surveyor. He also operated the Humphrey Mill in the Creede Mining District and served as the County Surveyor, a position he would hold for many years. Collins may have learned of the prospect in about 1912, from two geologists who were canvassing the United States for the United States Geological Survey in search of fluorspar sources. (In addition to its primary use as flux in steelmaking, fluorspar is used in ceramics and enamels and as a main ingredient for hydrofluoric acid.) The geologists, W. H. Emmons and E.S. Larsen, shared an office with Collins in Creede while they were investigating the area, and they reportedly told Collins about the fluorspar they had observed near the hot springs.[11]

Colorado Fluorspar Mine Company

Collins began working the prospect, which he named the Colorado Fluorspar Mine, in 1913. He entered into a ten-year lease with the Wagon Wheel Gap Improvement Company and set to work with a handful of mining partners, including Bert Hosselkus and Dan Phillips, to work on and around the unpatented claims that were located next to the Wagon Wheel Gap Improvement Company properties. In 1913 they shipped 5,000 tons of unprocessed ore to Colorado Fuel and Iron (CF&I) in Pueblo, mostly to be used as flux in producing steel.[12] In the next three years, the miners transported their ore by wagon to the Wagon Wheel Gap Depot (5ML.23, built 1883, National Register listed September 27, 1976) for shipment on the Denver & Rio Grande Railroad. The mine traffic shared the road with the hot springs resort for the one-and-a-half mile trip.

According to a State Mine Inspector report, the mine contracted with CF&I to provide 25,000 tons of fluorspar ore at $6 per ton in 1916.[13] Since a mill had not yet been constructed, it is likely this ore was minimally processed. The State Mine Inspector also reported that a boardinghouse had been constructed, and work had begun on an aerial tram to transport ore downhill from a new tunnel, which was probably the Wilson Level. (Unfortunately, the report did not specifically describe the aerial tram alignment, but it is likely this report referred to the

[11] Richard C. Huston, *A Silver Camp Called Creede: A Century of Mining* (Montrose, Colorado: Western Reflections Publishing Co. 2005) p.287.
[12] James B. Copeland and Mark A. Vendl, "The Wagon Wheel Gap Fluorspar Mine" *The Mining History Journal* Volume 18 (2011) P. 50.
[13] Colorado State Bureau of Mines Inspector *Report for Wagon Wheel Gap*, March 20, 1916. On file at Colorado State Archives collection of State Mine Inspectors Reports.

northern alignment, referred to as Alignment A in this nomination document, because Alignment A connected to the earliest of the developed areas at the mine.)

American Fluorspar Mining Leasing and Transportation Company

In 1917, Collins and three financial partners named Bert Hosselkus, Wallace Leary, and Winnie B. LeZotte formed the American Fluorspar Mining, Leasing and Transportation Company (American Fluorspar). Collins assigned his lease to the new company. The partners were all prominent in Creede. Hosselkus worked at a variety of mining ventures and was later known for his development of local fish hatcheries. Leary was the cashier of the local Tomkins Brothers Bank. Ms. LeZotte was married to Herbert LeZotte, who died from miner's consumption on January 5, 1917, leaving her with six children and the impending birth of their seventh. She entered into the mining partnership and lived four more years until she was killed in a train robbery near Walsenburg, Colorado in 1921.

The partnership was timely. Demand and prices for fluorspar soared with the onset of World War I. Imported pre-war fluorspar went for $5.88 per ton in 1916, while the domestically sourced mineral was up to $20 in 1917 and 1918.[14] Some of the profits went back into the operations. In 1917, the *Creede Candle* reported that the mine was shipping 300 tons of ore per week to CF&I, and that the mine would soon implement machine drills.[15] That same year, the *Candle* also reported on June 2 that Frank Ullman was hired as the mine superintendent.

On May 12, 1917, the *Creede Candle* reported a surface tram was under construction to transport material from the mine to the rail siding located at Wagon Wheel Gap. The company built a 150-ton capacity mill equipped with a Blake Crusher, jigs and three Deister Tables, and completed a second aerial tram by 1918.[16] For part of 1918-19, the company did not mine new ore, but reworked the material in its ore dumps through the new mill. A second aerial tram was constructed in 1918-1919.

Other profits went towards procuring the mine. American Fluorspar purchased the mine property from the Wagon Wheel Gap Improvement Company in April of 1918. The mining company's purchase incorporated 4040 acres of the Improvement Company's land, including the mill complex area and the hot springs resort, for $75,000. American Fluorspar used the additional land for grazing livestock. The Colorado Bureau of Mines State Mining Inspector wrote in his May 2, 1919 report, "…the once beautiful grounds surrounding the springs are now covered with cattle and sheep."[17] The report also noted several cottages for the married men were on the property. It's not clear if the actual Sierra Vista mining claims were part of the land transaction. A quit claim deed filed in 1924 suggests the claims may have ended up in the hands

[14] "Colorado State Bureau of Mines Biennial Report"(1917-1918) P 132.
[15] *Creede Candle*, January 27 and June 2, 1917.
[16] Colorado State Bureau of Mines Inspector *Report for Wagon Wheel Gap*, May 2, 1919, and April 29-30, 1918. Colorado State Archives collection of State Mine Inspectors Reports.
[17] Colorado State Bureau of Mines *Report for Wagon Wheel Gap*, May 2, 1919. Colorado State Archives.

of Ellwood Bergey, but American Fluorspar still had legal rights to access the claims via the ten-year mining lease expiring in January of 1924.

By 1920, American Fluorspar was mining the Intermediate and Wilson Levels.[18] An advertisement for workers in the *Creede Candle* pronounced "Good living and working conditions," and "No Foreigners wanted."[19] As part of the "good living" conditions, the mining company constructed housing along Goose Creek for their workers.

Collins had procured a contract with CF&I for a guaranteed price above $20 into 1919, which may have been the peak for his American Fluorspar Mine, as the prices plummeted after the war. Prices were $12.71 a ton in 1921. In 1922, there was almost no production throughout the state.

Wagon Wheel Gap Fluorspar Mine

The years 1924 and 1925 saw some quick real estate transfers precipitated by the sale of the mine to CF&I. The Pueblo-based steel manufacturing company had leased the fluorspar mine in 1924. A flurry of land exchanges between the Wagon Wheel Gap Improvement Company, the American Fluorspar Company, and what appears to be a holding organization called the Spar Ranch Company, resulted with Ellwood Bergey – who was a partner in all of the companies – owning the resort while CF&I acquired the mine on July 29, 1925 for $49,442.29. [20] CF&I renamed the workings the Wagon Wheel Gap Fluorspar Mine. A year after CF&I purchased the mine, Collins received 863 acres north of the mining property (and not included in the sale to CF&I) from the Spar Ranch Company, of which he was also the president.

The mine experienced peaks and valleys in the demand for fluorspar. It closed for half of 1927 and all of 1928 and 1929. During the Depression, the operation shut down from1931 to April of 1934 and from October of 1937 to April of 1939. In other years, the mine and mill prospered, shipping up to 8610 tons in its peak year (1947).[21]

Under CF&I's ownership, George Botsford ran both this mine and CF&I's Orient iron mine near Villa Grove until 1938, when Ernest Gustafson replaced Botsford. He remained until James Whitney came on in 1947. Whitney managed the mine until it closed in July of 1950.
CF&I drove the Main Haulage Level tunnel in 1925, and continued the American Fluorspar's work on the Intermediate Level. Miners drove a new Third Level tunnel in the early 1940s as the ore in the Intermediate Level played out. By the middle 1940s, the Intermediate Level tunnel was used solely for ventilating the underground workings. Mining historians James Copeland and Mark Vendl noted that during CF&I's tenure at the mine, all ore was extracted from hillside tunnels and there were no shafts. Miners would drive a raise between the development levels to

[18] Harry Aurand, "Fluorspar Deposits of Colorado", *Colorado Geological Survey Bulletin 18*, (1920): P.62.
[19] *Creede Candle*, October 16, 1920.
[20] James B. Copeland and Mark A. Vendl, "The Wagon Wheel Gap Fluorspar Mine" *The Mining History Journal* Volume 18 (2011) p. 50-51.
[21] Ibid p.50.

access the ore, which was transported underground to the Main Haulage Level. The underground workings would have created an extensive honeycomb of tunnels.[22]

Mules hauled ore in carts along tracks within the tunnels. The mules in the Third Level were replaced in the 1940s by battery powered motors. The aerial trams transported some of the ore down the mountain, and water and supplies up the mountain. The northern tram (known as Tram A in this document) closed down in either the 1930s or early 1940s, when work ended at the Wilson Level. By 1944, all of the supplies, water, and ore were transported through the Main Haulage Level of the mine, or on trucks travelling the mine's dirt road, and the southern aerial tram (called Tram B in this document) was abandoned.

Between 1925 and 1945, CF&I constructed numerous improvements, including the trestle to the Main Haulage Level of the mine (1925) and various support buildings near the mill including shops and offices, a sawmill, the water pump house along the banks of Goose Creek, and additional employee residences on both sides of Goose Creek. When Goose Creek flooded in 1927, it destroyed many of the residences. A small hydroelectric generator was installed around 1925. This generator may have been installed in the pump house on Goose Creek. The annual State Mine Inspector reports from this time note the generator was the sole source of electricity for the offices and residences, but it must not have provided an adequate supply, because a 1947 Inspector's report noted gasoline powered lights in some of the residences.

The top deck of the trestle was enclosed and extended to the mill by the 1940s. When CF&I transitioned from mule drawn trams to primarily truck traffic in the 1940s, large bins for concentrates and waste were installed in a shed-roof addition on the south and west sides of the mill.

Information from the CF&I archives provides the following snapshot of a worker's income a few years before the mine closed. In 1947, the mine employed an average of 30 miners per day. The daily wage for a miner ranged from $7.72 for the ore trammers to $8.80 for the timber men. The mine foreman earned $13.56 a day. In addition to the miners, seven men worked in the mill during the day shift and five men worked during the night shift. Mill workers' daily earnings ranged from $7.72 for the ore sorter to $8.56 for the engineer-fireman. The mill foreman earned $11.40 a day. Four other men were also employed at the mine as truck drivers, carpenters, and laborers. Their daily pay ranged from $7.72 to $8.56.[23]

In 1950, CF&I officials determined they could purchase fluorspar more cheaply from Mexico and that it might be prudent to reserve their fluorspar deposit for future use.[24] They closed the mine in July after shipping a total of 118,023 tons since they began mining in 1924. They left

[22] Ibid P. 55.
[23] Ibid p.64.
[24] Lee Scamehorn, *Mill and Mine*: The CF&I in the Twentieth Century (Lincoln, Nebraska:University of Nebraska Press,1992) p. 172.

almost all of the equipment intact in the mill, in anticipation of returning when economic conditions warranted re-opening the mill. The surviving buildings from CF&I's tenure include the mill, an administration/parts building, a compressor and shop building, and a shower and change room.

The mine never re-opened. The owners of the nearby hot springs resort, which by then was called the 4UR Ranch, acquired the mine complex from CF&I in 1982 (surface rights) and 1986 (mineral rights). They converted the old miners' lodging into staff housing, and have kept the mill and mining complex nearly unchanged.

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Steelworks Center of the West Archives, Pueblo, Colorado, accessed July 2018. Includes all documents from the Colorado Fuel and Iron Company.

Previous documentation on file (NPS):

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

Primary location of additional data:
__X__ State Historic Preservation Office
____ Other State agency
____ Federal agency
____ Local government
____ University
____ Other
Name of repository: _____

Historic Resources Survey Number (if assigned): ____5ML.252_____

10. Geographical Data

Acreage of Property ___105 acres_____

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates
Datum if other than WGS84:_____
(enter coordinates to 6 decimal places)
1. Latitude: Longitude:

2. Latitude: Longitude:

3. Latitude: Longitude:

4. Latitude: Longitude:

Or
UTM References
Datum (indicated on USGS map):

[ ] NAD 1927 or [X] NAD 1983*

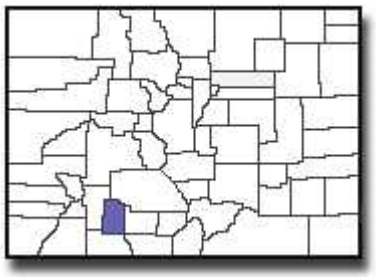
A. Zone: 13	Easting: 338741	Northing: 4179823
B. Zone:13	Easting: 338776	Northing: 4179814
C. Zone:13	Easting:339586	Northing: 4179162
D. Zone:13	Easting : 339183	Northing: 4178857
E. Zone: 13	Easting: 338694	Northing: 4179139
F. Zone:13	Easting: 338700	Northing: 4179176
G. Zone:13	Easting:338801	Northing: 4179345
H. Zone:13	Easting : 338766	Northing: 4179379
I. Zone: 13	Easting: 338732	Northing: 4179629

*Coordinates provided by Google Earth

Verbal Boundary Description (Describe the boundaries of the property.)
The boundary of the Wagon Wheel Gap Fluorspar Mine is shown as a solid white line on the accompanying boundary map and encompasses all resources within the district as described in Section 7. The property is a contiguous block of land in an irregular polygon.

Boundary Justification (Explain why the boundaries were selected.)
The boundary of the Wagon Wheel Gap Fluorspar Mine was drawn to include the extent of the mine and mill with its associated buildings, structures, features, objects, and artifacts. This reflects the historic surface area encompassed by the milling and mining operations and excludes nearby improvements related to the neighboring resort.

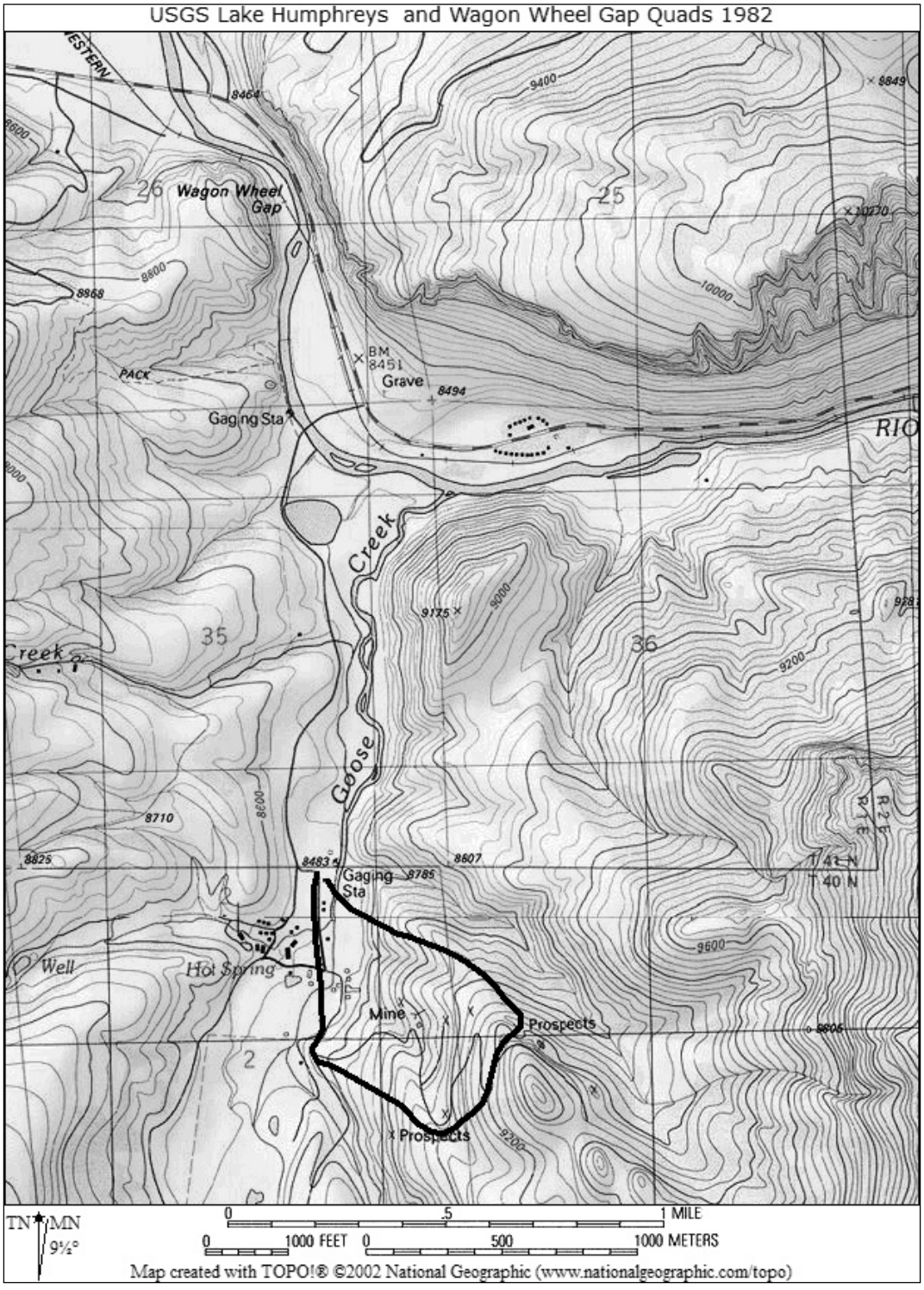
Boundary Map



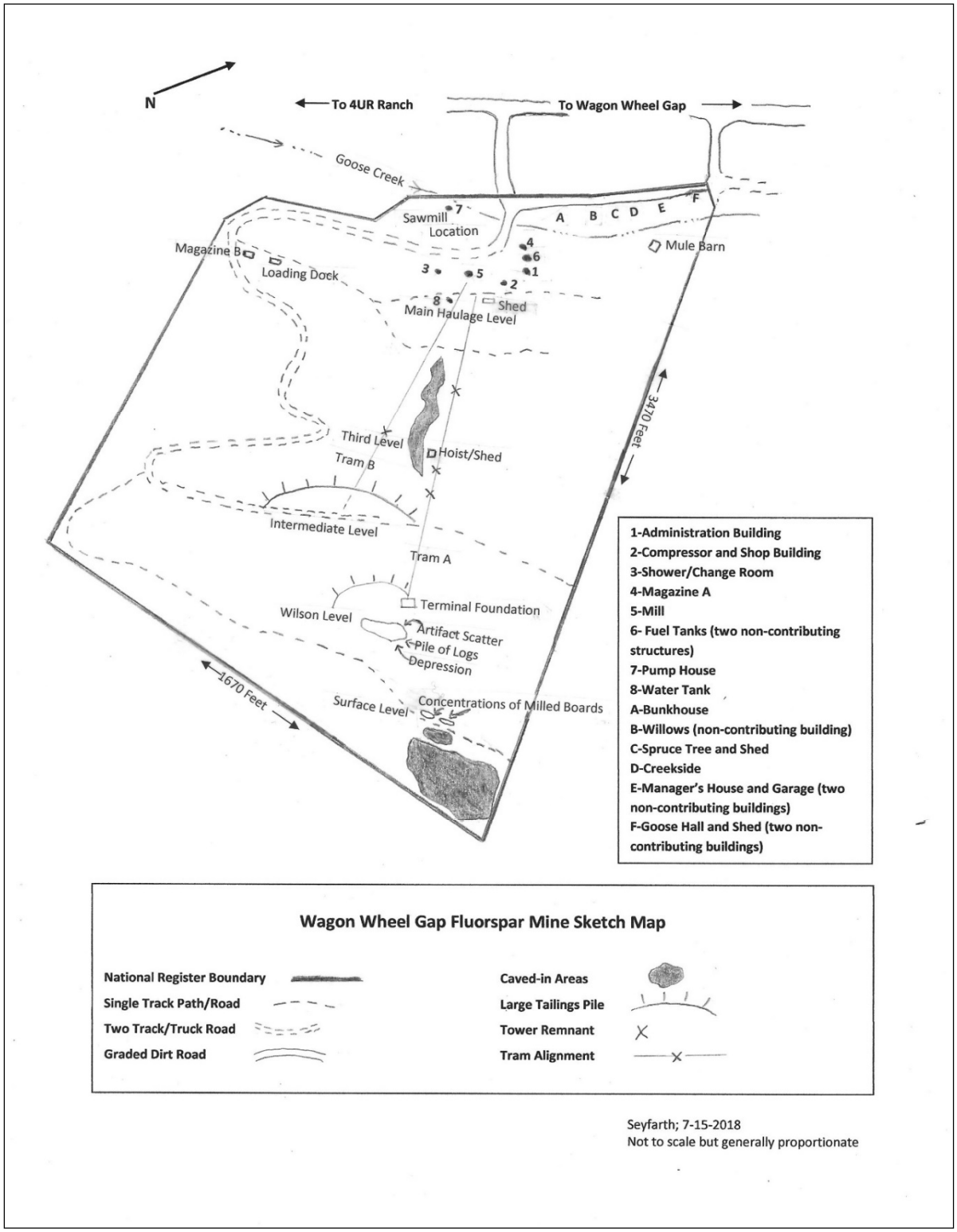
State Perspective – Mineral County

11. Form Prepared By

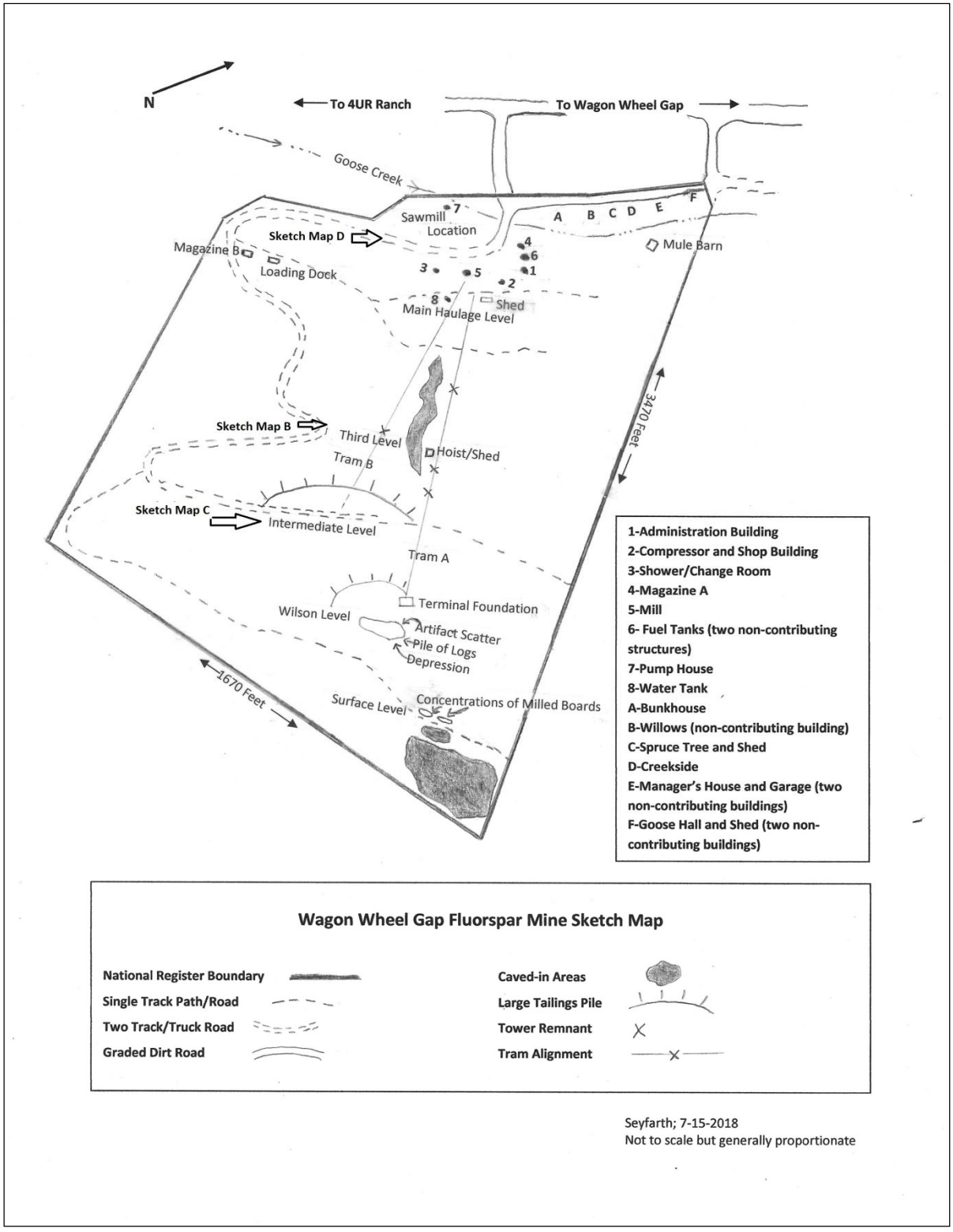
name/title: Jill Seyfarth (for property owner)
organization:
street & number: PO Box 295
city or town: Durango state: CO zip code: 81302
e-mail jillseyfarth@gmail.com
telephone: 970-247-5893
date: September 1, 2018



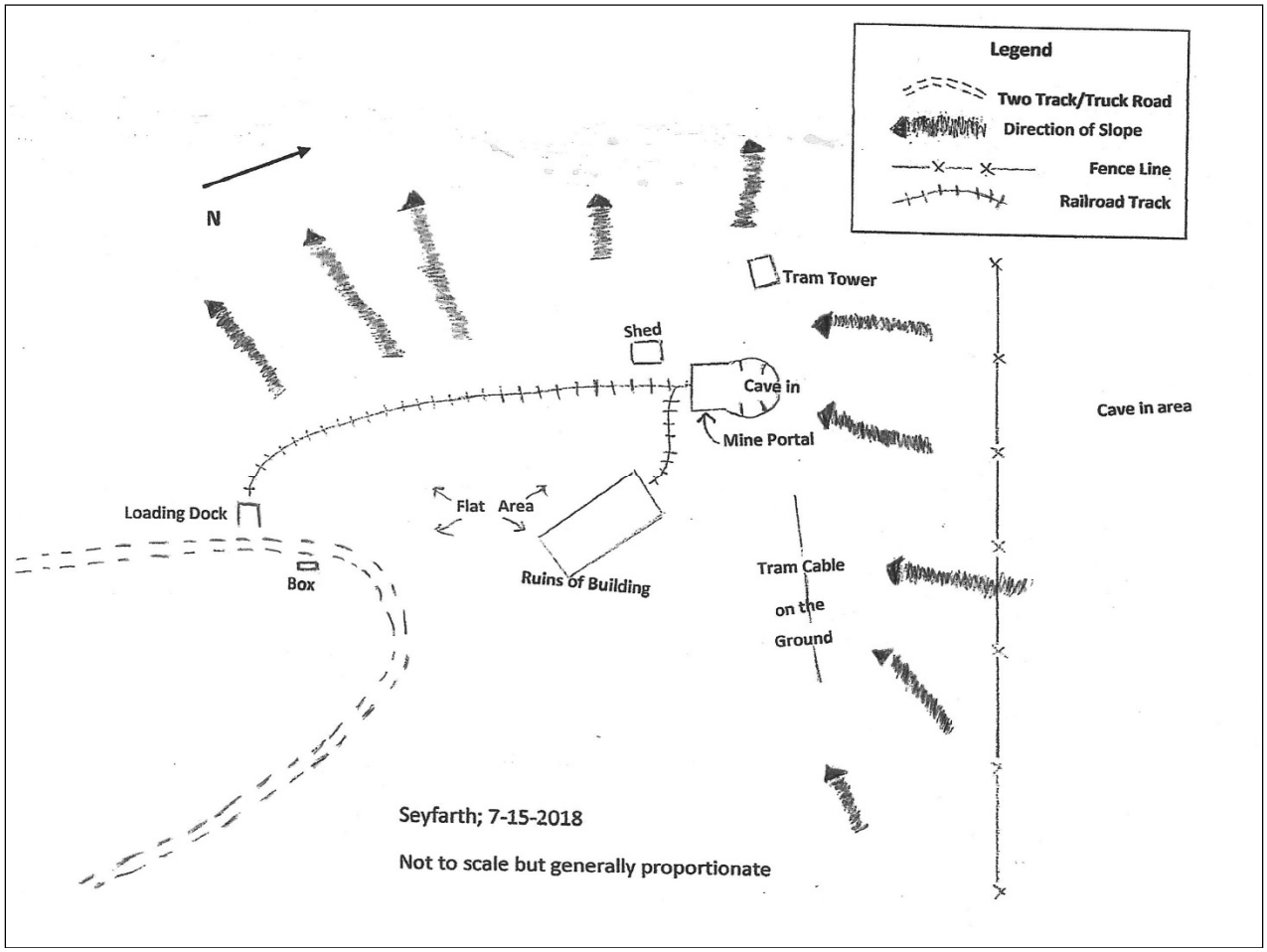
Location Map 2 - General Location of the District



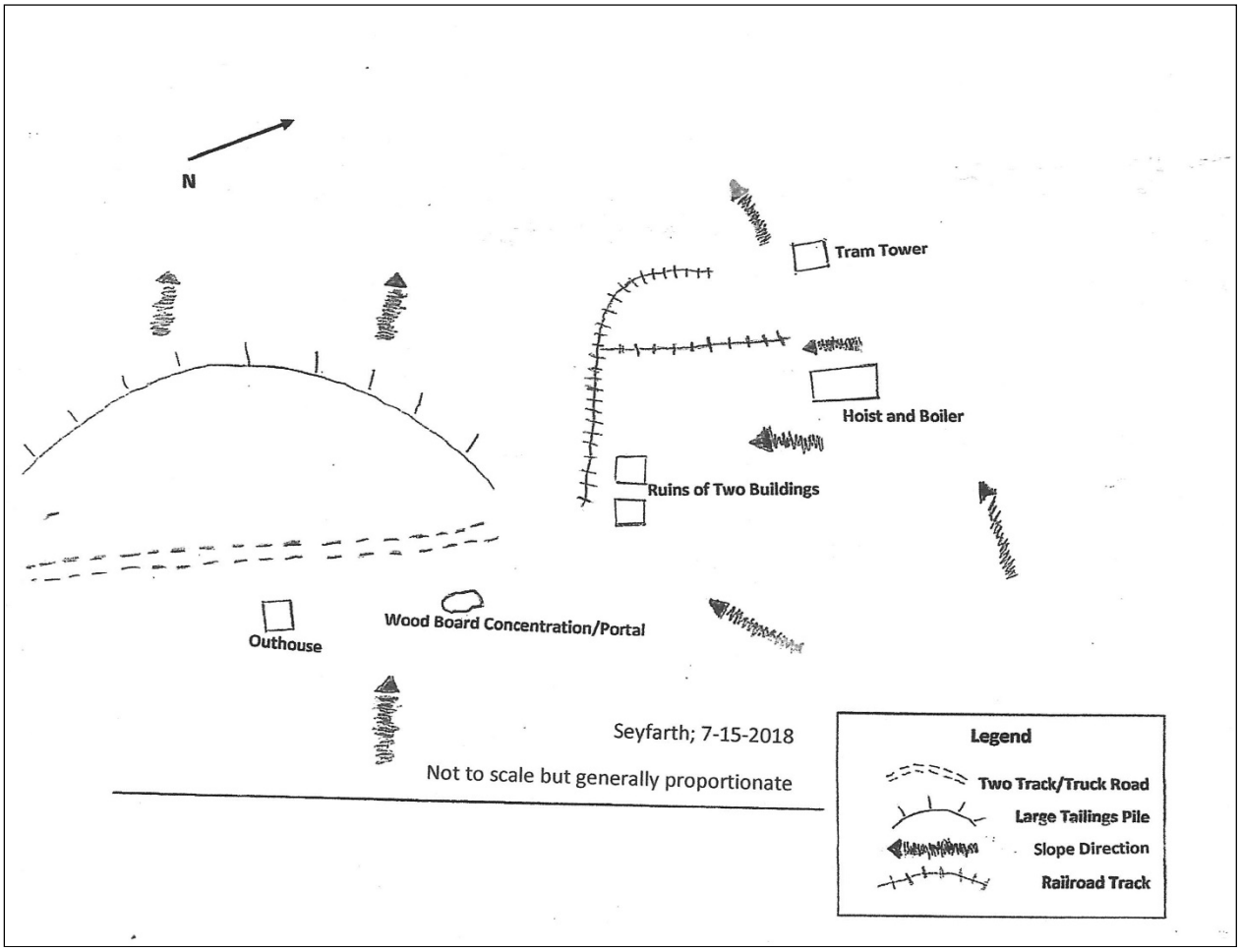
Sketch Map A-1 - Overall Site



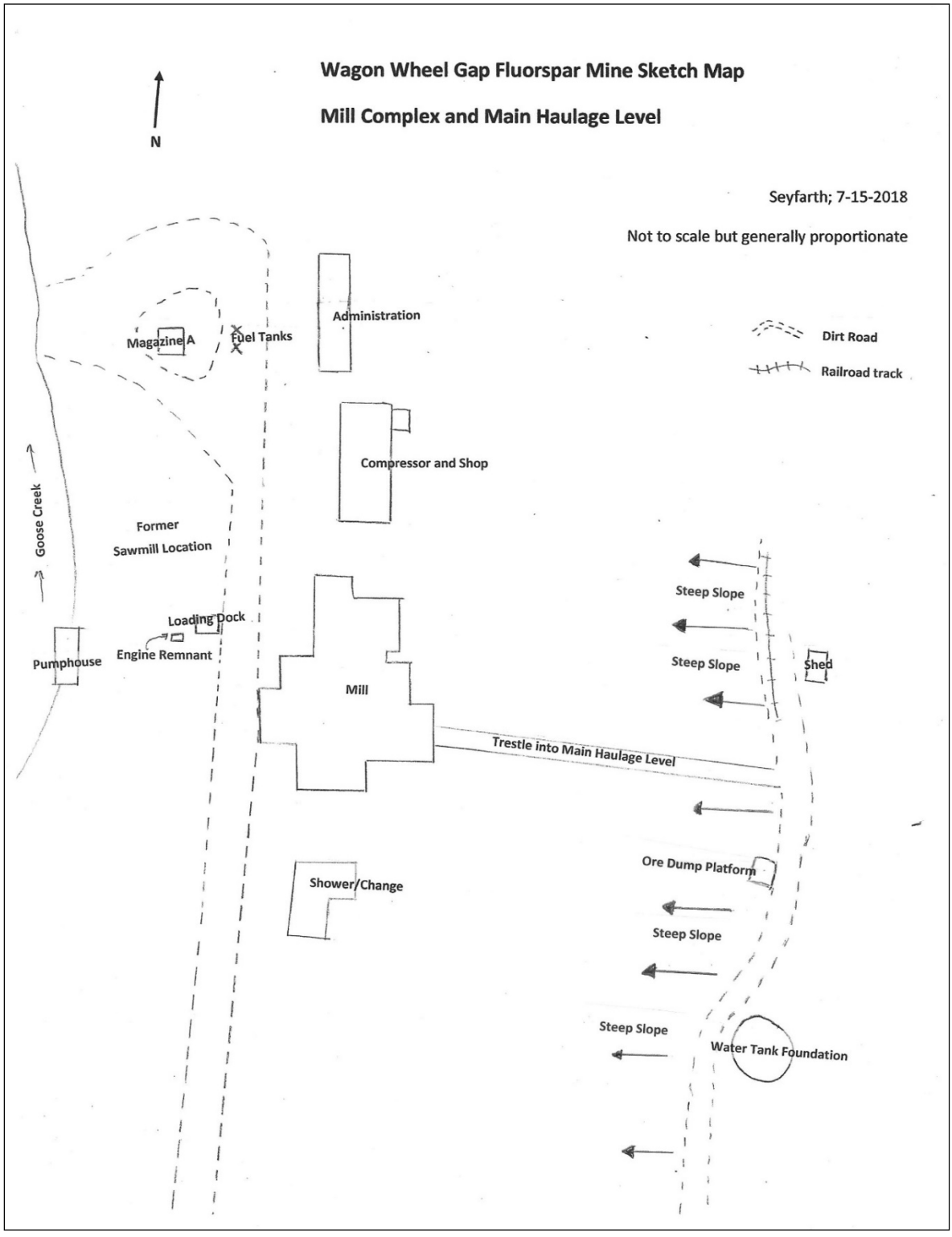
Sketch Map A-2. Index to Maps, Showing Locations of Sketch Maps B, C and D.



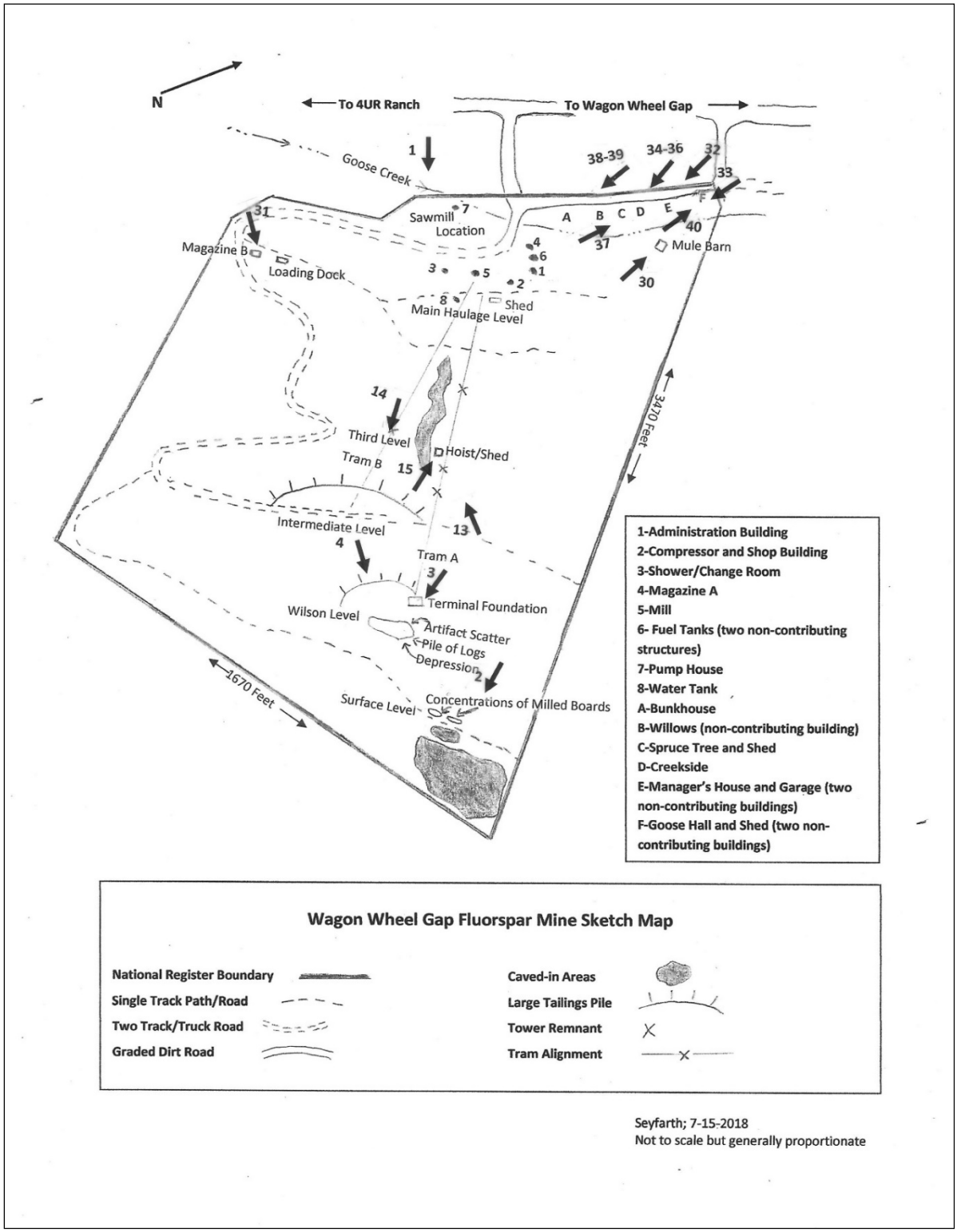
Sketch Map B - Details of the Third Level



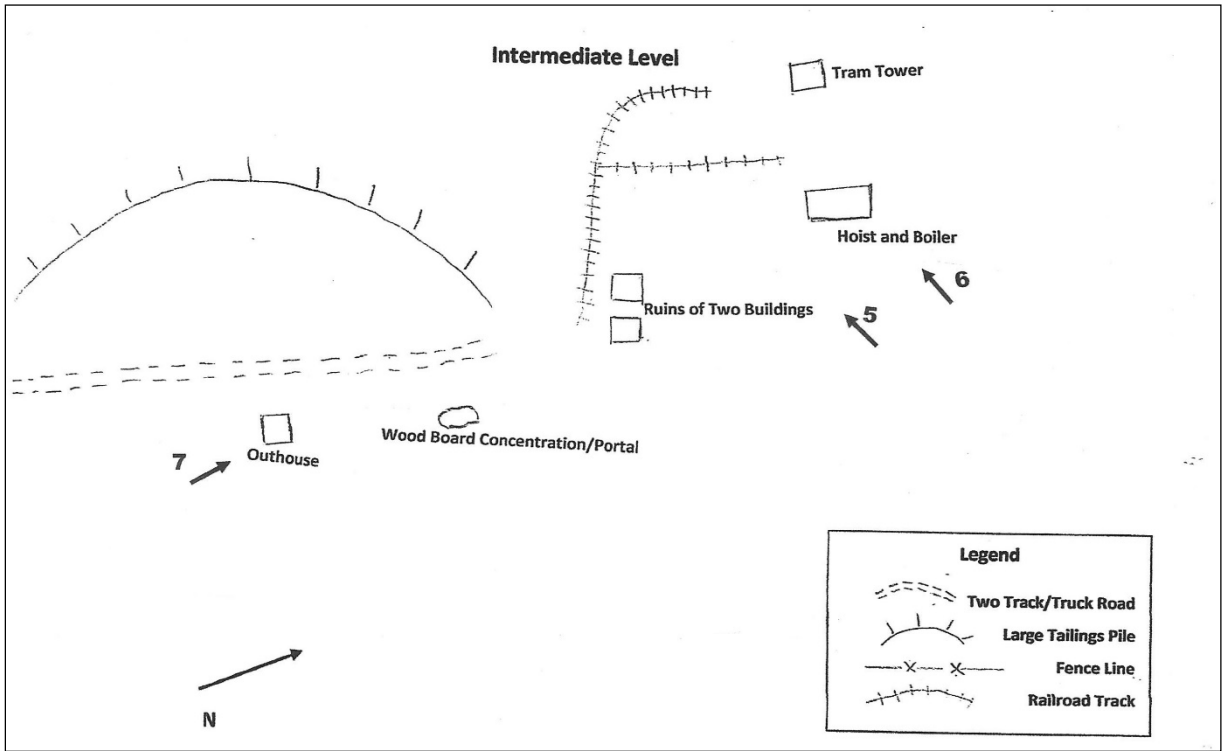
Sketch Map C - Details of the Intermediate Level



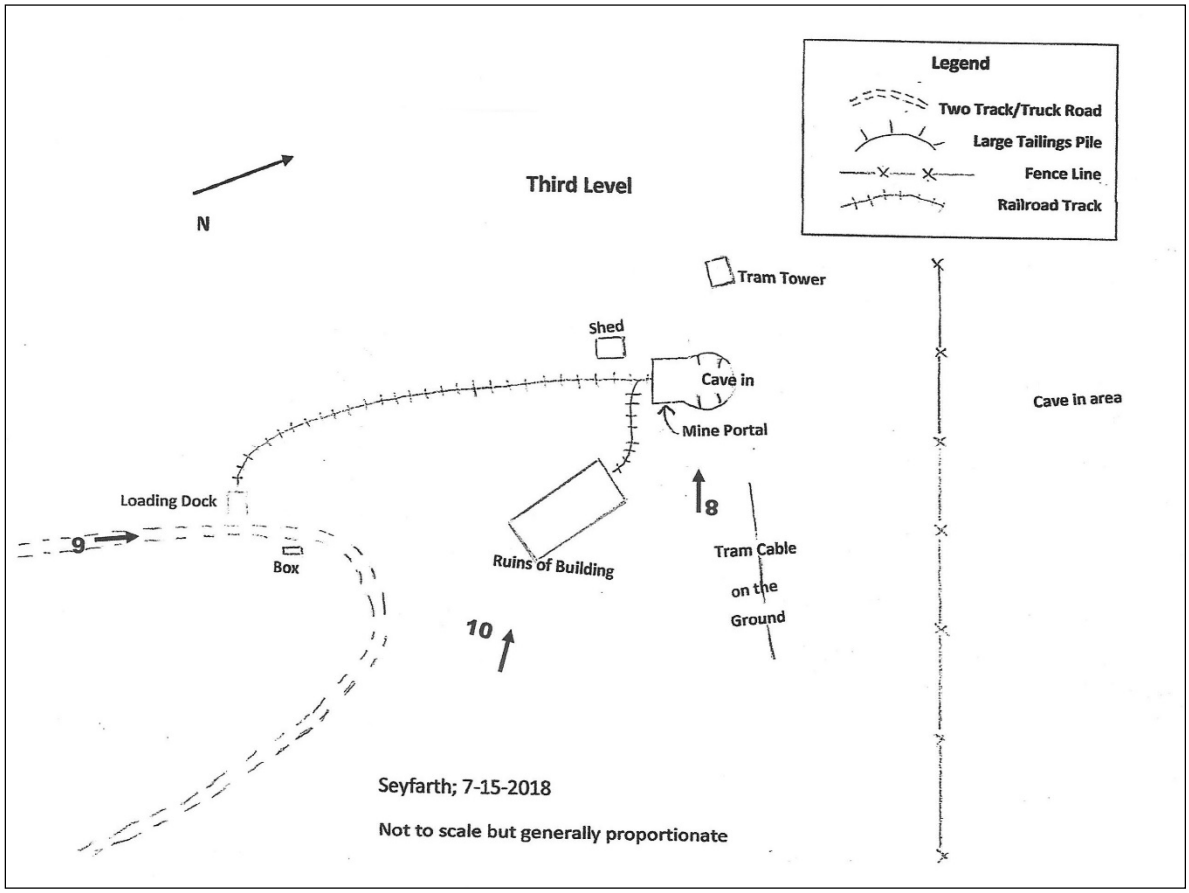
Sketch Map D – Details of the Mill Complex and the Main Haulage Level



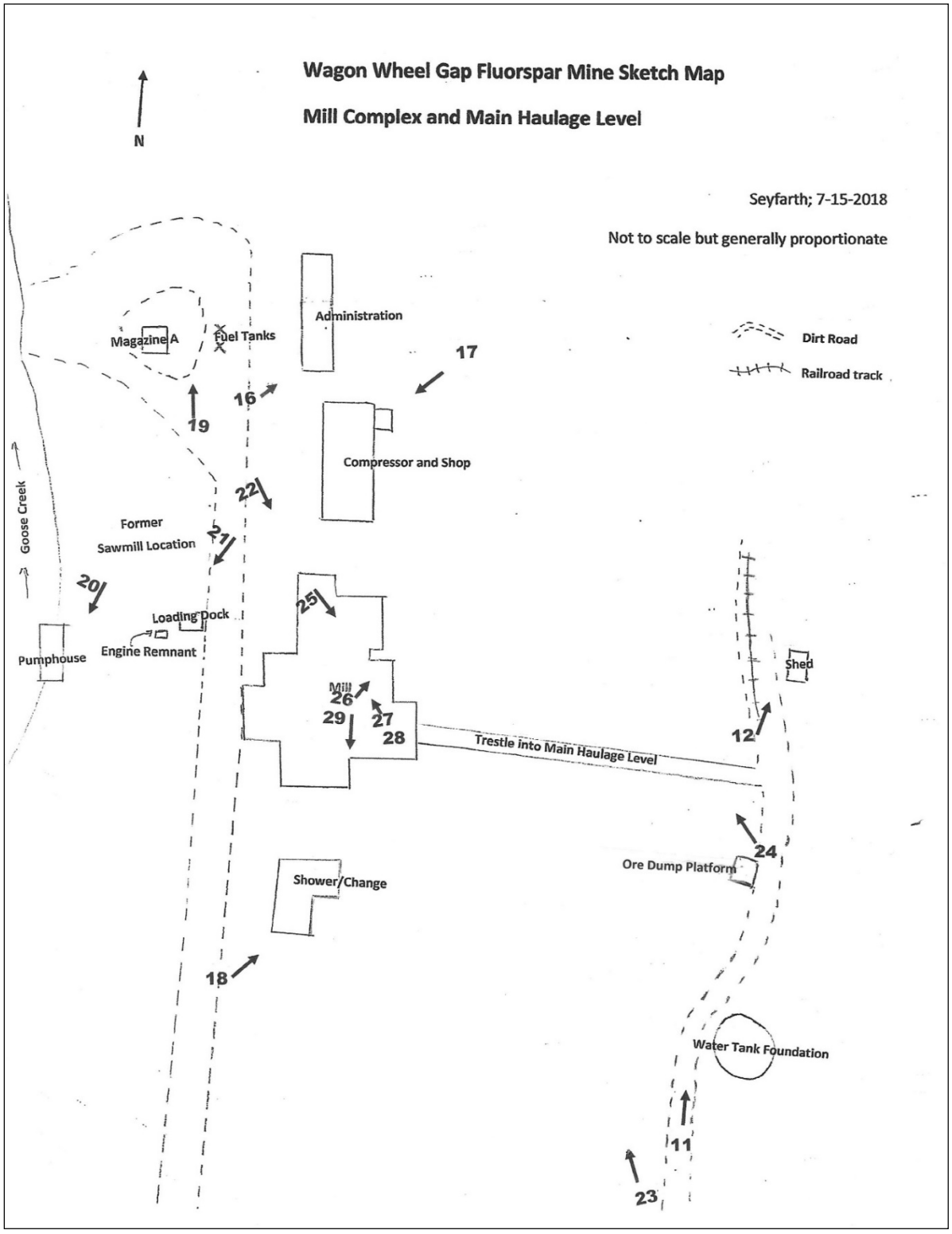
Sketch Map E – Locations of Photographs 1-4, 13-15, and 30-40



Sketch Map F – Locations of Photographs 5-7



Sketch Map G – Locations of Photographs 8-10



Sketch Map H – Locations of Photographs 11-12, and 16-29

Photograph Log

The following information pertains to all photograph numbers:

Name of the Property: **Wagon Wheel Gap Fluorspar Mine and Mill**
City or Vicinity: **Creede**
County: **Mineral** **State: Colorado**
Photographer: **Jill Seyfarth**
Date of Photographs: **April 19 and May 17, 2018**
Negatives: **Jill Seyfarth, Durango, Colorado**

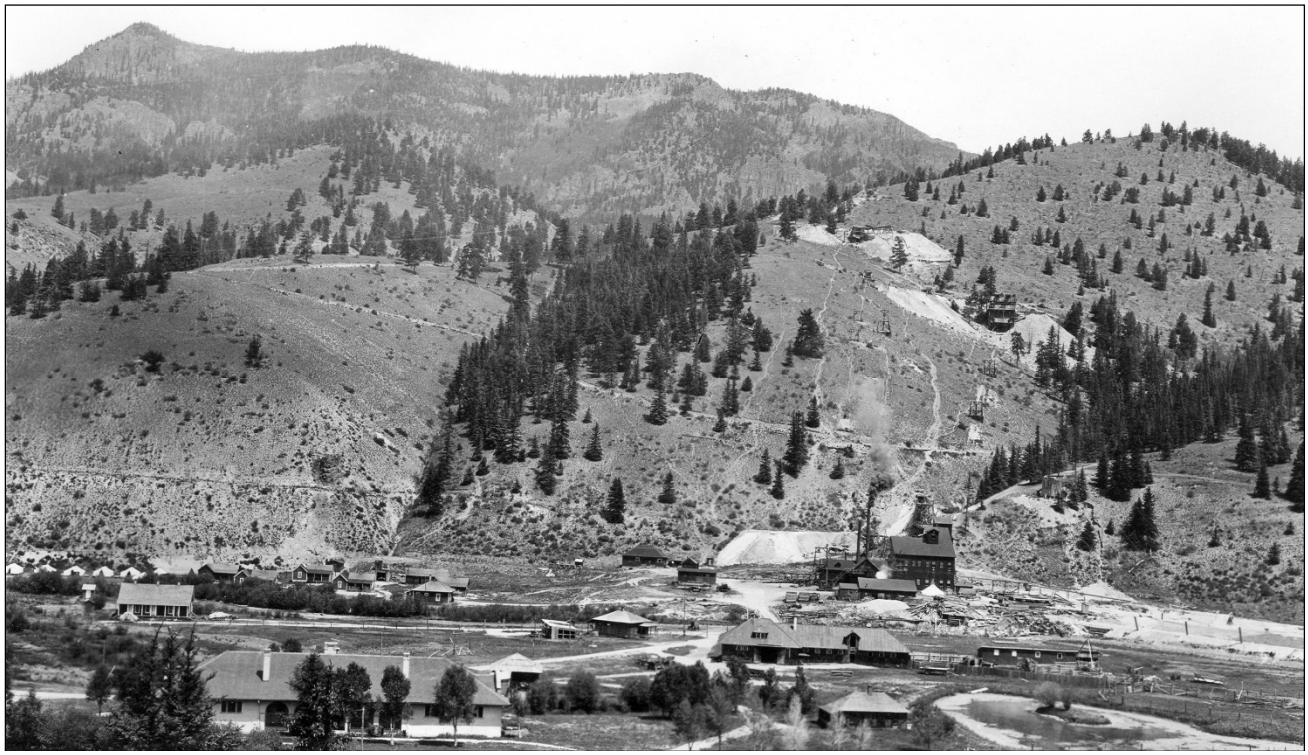
Photo No.	Photographic Information
1	The mine and mill as seen from the 4UR Resort. From left to right are the Administration Building, the Compressor and Shop Building, the Boiler House and Mill, and the Shower/change Building. Magazine A is located in front of the Administration Building. The fuel tanks (non-contributing) are located to the right of Magazine A. The mine is on the slope above and behind the complex. Looking east.
2	The Surface Level; concentration of timbers. Looking east-southeast.
3	Remains from the Tram A terminal at the Wilson Level. Looking southeast.
4	Cribbed waste rock pile at the Wilson Level at the mine. Looking east-southeast.
5	Overview of the northern part of the Intermediate Level of the mine. Looking west.
6	Collapsed building with boiler and hoist aligned with a tram tower from Tram Alignment A at the Intermediate Level of the mine. Looking west.
7	Outhouse at the Intermediate Level of the mine. Looking north.
8	Third Level of the mine, showing portal on the right, small building in center, tram tower from Tram Alignment B and hoist house in the background. Looking northwest.
9	Ore loading dock for trucks along the road at the Third Level of the mine. Looking north.
10	Third Level of the mine. Partially collapsed building in the foreground. Looking north-northwest.
11	Main Haulage Level of the mine. Remains of the water tank are on the right side of the recently regarded road and the ore dump platform is on the left side of the road. Looking north.
12	Main Haulage Level of the mine with wood shed and rail fragments. Looking northeast.
13	Tram tower from Tram Alignment A. Looking west.
14	Tram tower from Tram Alignment B. Looking east-southeast.

Photo No.	Photographic Information
15	Hoist House. Looking northwest.
16	Administration Building at the north end of the mill complex. Looking northeast.
17	Compressor and Shop Building back side. See Photo 1 for front side of this building. Looking southwest.
18	Shower/Change building. Looking northeast.
19	Magazine A and fuel tanks (non-contributing). Looking north.
20	Pump House on the east bank of Goose Creek. Looking southwest.
21	Sawmill location with loading dock and steam engine remnants located along the road. Looking southwest.
22	The Mill. The tall stacks extend from the roof of the boiler house which is attached to the Mill. Looking southeast.
23	North side of the Mill with the Shower/change building in the lower left foreground. Looking north.
24	The Mill trestle connecting to the Main Haulage Level at the mine. Looking northwest.
25	Two Hendrie and Bolthoff boilers inside the Mill. Looking southeast.
26	Murray Corliss Engine pulley with grooves for the rope and some of the rope inside the Mill. Looking northeast.
27	Skinner steam engine inside the Mill. Looking northwest.
28	One of three trommels inside Mill. Looking down.
29	Jigs in the Mill. Looking south.
30	Mule Barn. Looking northwest.
31	Magazine B, with loading dock to the left. Looking east.
32	Overview of Miners' Housing Area. From left to right, Goose Hall, Manager's Garage and House (ca. 1990s), Creekside, Spruce House, The Willows (ca. 1990s). The bunkhouse is to the far right and not clearly visible. Looking east.
33	Goose Hall (non-contributing). Looking east-southeast.
34	Manager's house and garage (non-contributing). Looking east-southeast.
35	Creekside Cabin. Looking southeast.
36	Spruce Tree Cottage. Looking east.
37	Rear of Spruce Tree Cottage and Shed with historic siding. Looking north.
38	The Willows (non-contributing). Looking southeast.
39	The Bunkhouse. Looking southeast.

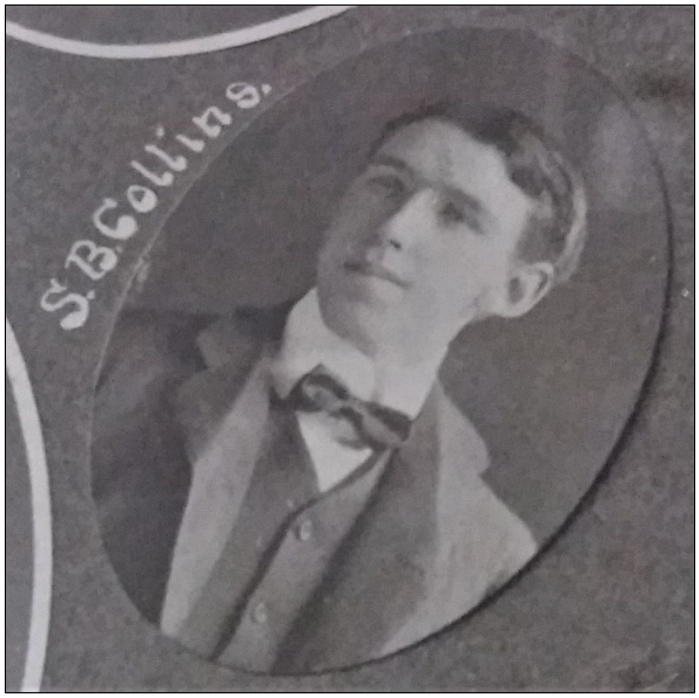
Historic Photograph and Images Log

Photo No.	Photographic Information
H1	View of the north side of the mill and trestle taken in 1926 by E.E. Burchard. USGS Photo 1324
H2	View of mine and mill, looking east, taken in 1926 by E.E. Burchard. The hot springs resort is in the foreground. The Wilson and Intermediate Levels have large buildings. Miners' housing on the east side of Goose Creek is visible to the left in the background. That housing was mostly removed by the flood of 1927. The bunkhouse is on the far left, between the rows of housing and the Resort bath house. USGS Photo EF1325
H3	Shrive Collins 1901 graduation photograph from the Colorado School of Mines. Arthur Lakes Library photo
H4	George Botsford was the superintendent of the mine from 1924 to 1938. Photo from CF&I Blast, August 12, 1938, located in the Steelworks Center of the West Archives, Pueblo.
H5	Sheet 1 of 2 of the Historic Survey Plat of the Sierra Mining Claims.
H6	Sheet 2 of 2 of the Historic Survey Plat of the Sierra Mining Claims.

H1. View of the north side of the mill and trestle taken in 1926 by E.E. Burchard. USGS Photo 1324

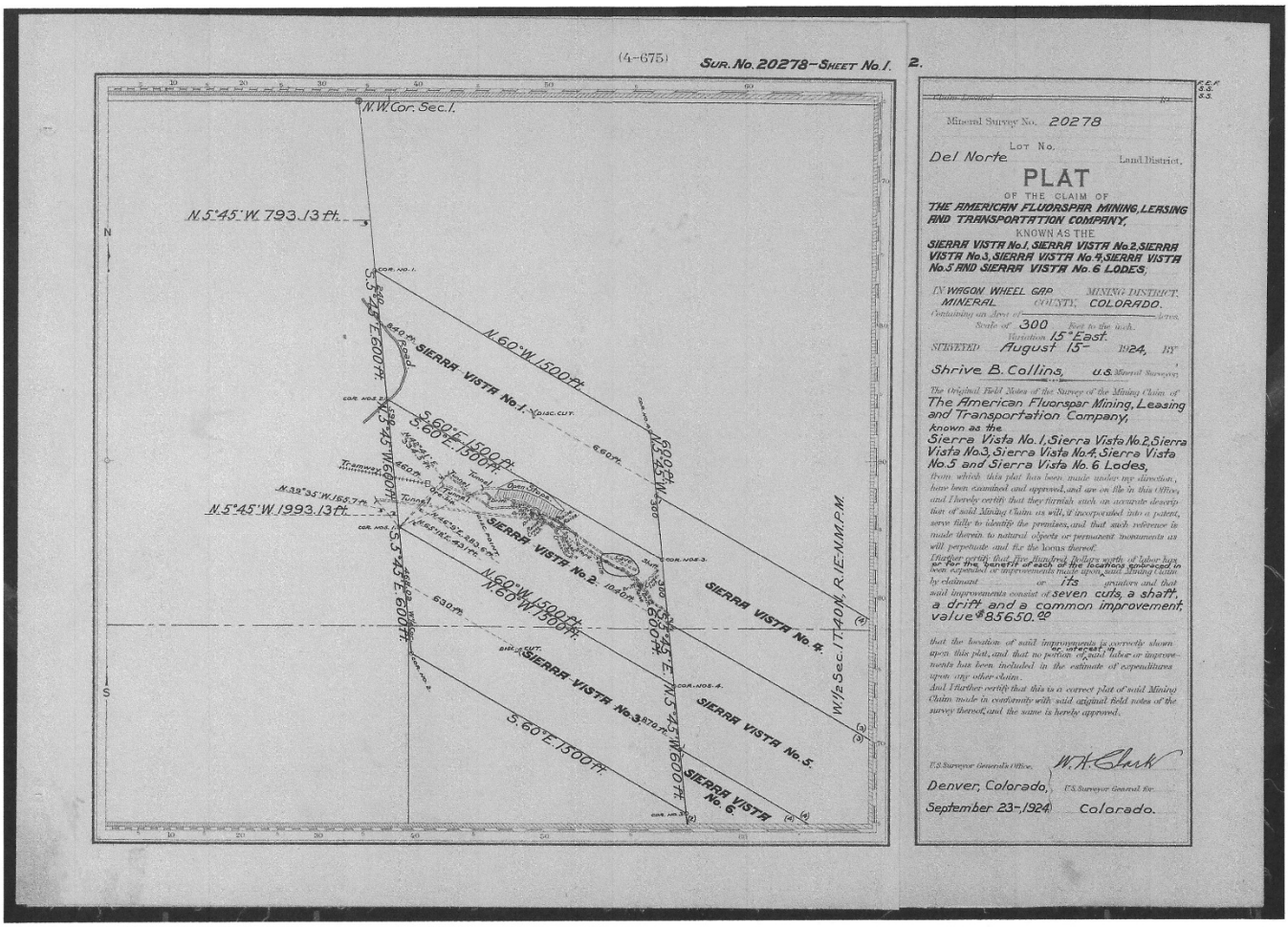


H2. View of mine and mill, looking east, taken in 1926 by E.E. Burchard. The hot springs resort is in the foreground. The Wilson and Intermediate Levels have large buildings. Miners' housing on the east side of Goose Creek is visible to the left in the background. That housing was mostly removed by the flood of 1927. The bunkhouse is on the far left, between the rows of housing and the Resort bath house. USGS Photo EF1325

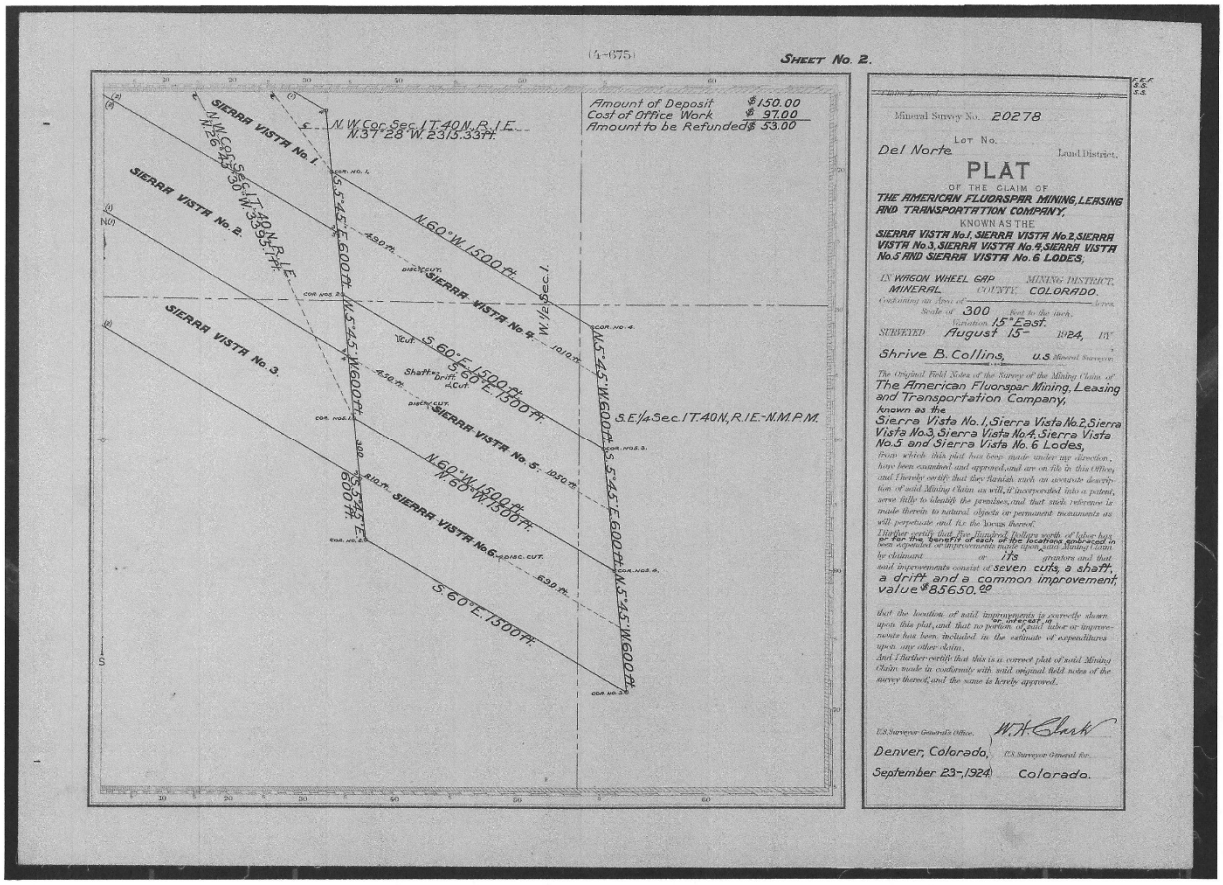


H3. Shrive Collins 1901 graduation photograph from the Colorado School of Mines. Arthur Lakes Library photo.

H4. George Botsford was the superintendent of the mine from 1924 to 1938. Photo from *CF&I Blast*, August 12, 1938, located in the Steelworks Center of the West Archives, Pueblo.



H5. Sheet 1 of 2 of the Historic Survey Plat of the Sierra Mining Claims.



H6. Sheet 2 of 2 of the Historic Survey Plat of the Sierra Mining Claims.

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

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.