

Gilman, Colorado:
From Metal Mining Frontier
to Colorado's Most Successful
Company Town

By
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Anyone driving south on Highway 24 from Minturn, Colorado, will pass a most peculiar ghost town about five miles up the road. A long, C-shaped turn along the flank of Battle Mountain reveals a large mine looming over the hillside, with several rows of modest, abandoned houses along a steep hillside below it. Upon closer observation, the modern construction of these houses becomes unmistakable, as does the fact that they haven't been inhabited for decades. The houses gradually fade from view, but at the end of the long turn, lies a road into town closed off by a large metal gate bearing a prominent sign warning that "trespassers will be prosecuted."

Those bold enough to disregard the sign would likely be shocked by what they would find inside: homes filled with furniture and appliances, trucks left behind in a garage, a bowling alley with a few random pins strewn around the broken lanes, a hospital with x-ray images scattered everywhere, an administration building with company documents left in the drawers of the desks, a chalkboard in the shaft house covered with the names of the employees who worked the mine's last shift, and a cage perched over the mine shaft waiting to be lowered. This is Gilman, Colorado, an abandoned, modern zinc-mining town that begs for an explanation.

Gilman's early history fits within the broad pattern of Colorado's late-nineteenth-century mining industry, but it was the most successful of all the Battle Mountain settlements that emerged after Leadville's silver boom. Early Gilman resident and local historian, Mrs. J. A. Thompson, described a flourishing boomtown inhabited by eastern capitalists and rugged mountain outlaws alike. Thompson's Gilman was a place that "took the cake at that time."¹



Looking down on Gilman housing. The main shaft is left of center in the photo. Stacks of mine timbers are to the right of the shaft. A small section of U.S. Highway 24 can be seen at the upper left. Photographer: Byron Stanley. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

By the last years of the Progressive Era, the Empire Zinc division of New Jersey Zinc Company had converted Gilman into a company town by consolidating most of its many mines into one giant mechanized monolith named the Eagle Mine, and by rebuilding and maintaining total control of the town. This marked the beginning of a long period of corporate paternalism, and of Gilman's steady rise to prominence as one of America's leading zinc producers. In 1921, journalist Walter W. Phippeny looked at Gilman from the perspective of the utilitarian ideal that had carried over from the Gilded Age. He asserted that the American flag he saw posted on top of the Gilman grade school "means more to us than ever before. It is the symbol that typifies the aggressiveness of true Americans."²

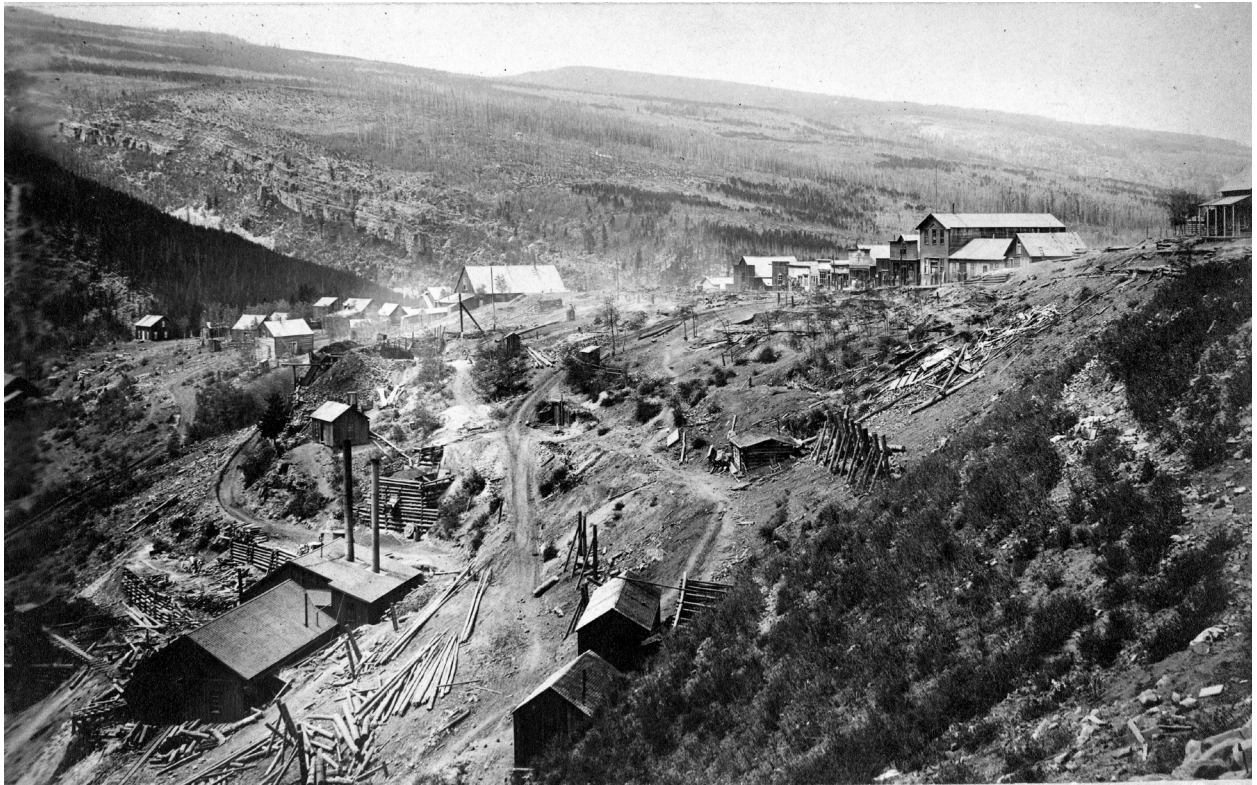
During and after World War II, Gilman's immense zinc output played an essential role in the U.S. military effort. In 1951, *Denver Post* staff writer Art Kirkham called Gilman "a small but entirely complete-community [*sic*]" that "is working these days with revitalized energy to supply a nation arming for defense with vitally needed zinc." Fourteen years later, Eagle County historians MacDonald Knight and Leonard Hammock declared the New Jersey Zinc Company—which had at that point accomplished a sixty-year stretch of highly productive mining—an essential part of the Eagle County economy. They claimed that "the towns of Redcliff, Gilman, and Minturn owe their prosperity to the payroll of the company" and "to a lesser extent, the towns of the lower part of the valley are also benefited."³

By the late 1970s, the Eagle Mine had over-taxed its metal reserves, and with zinc prices plummeting, Gilman's period as a company town rapidly came to an end. The company abandoned the town in 1985, and in 1986 Gilman and related Empire Zinc properties were designated as a Superfund site by the Environmental Protection Agency.

Two years later, an EPA-approved initiative by New Jersey Zinc's parent company, Paramount Communications, to pump discarded wastewater back into the Eagle Mine caused massive contamination of the Eagle River. By the spring of 1990, an orange sludge coated rocks on the Eagle River, blew out of snow guns at Beaver Creek ski resort, and even coated toilet bowls in Minturn, causing widespread public outrage. The resulting cleanup lasted fourteen years and cost Paramount at least \$70 million dollars.⁴

In 2002, former Eagle Mine shift boss William Burnett published *The Eagle on Battle Mountain at Gilman: Colorado and My Life as I Remember* through the Eagle Valley library district. Around the same time journalists in Eagle County began to show renewed interest in Gilman's history, in large part due to southern real estate mogul Bobby Ginn's 2005 announcement of his intention to build a private ski and golf community on Battle Mountain. If the current owners of the Gilman town site, The Crave Group, complete their planned five thousand-acre mixed-used development and private ski club, Gilman will become the latest of many Colorado mining towns with remediation issues to enter the state's ski industry.

Gilman's 106-year life is in several ways exceptional among mining-turned-resort towns such as Crested Butte, Aspen, Breckenridge, and Silverton. It was one of the few mining towns in Colo-



The Iron Mask Mine near Gilman before it was destroyed by a fire in 1886. Wood is scattered at the upper right from a house that was blasted to prevent a fire from spreading, c. 1885. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

rado with over seventy years of nearly continuous mass production during the twentieth century, with about \$328 million in total production as of 1972, and was the state leader in total zinc revenues.

During this time Empire Zinc's experiment in corporate paternalism was remarkably successful in forestalling unions, experiencing about thirty-five years of relative stability. This essay, the first of a two-part history of Gilman, tells the story of a boomtown that transformed into a model twentieth-century mining operation, while camouflaging common industry-wide problems of class disparity and ethnic discrimination. It also tells the story of a distinctive western American folk community that embraced some aspects of modernity and rejected others.

The Rough Life, 1879-1887

Leadville's silver boom caused that city's annual metal production to balloon from \$670,000 in 1877 to \$2,500,000 in 1878. Within a year, the biggest mining bonanza in Colorado's history stretched northward into the Battle Mountain region, and several mining camps sprang up after prospectors discovered lead-silver ore bodies around present-day Redcliff. By 1880, Battle Mountain had a smelter, a sawmill, and a mining district with elected officers to settle disputes about the scores of scattered mining claims. The Denver and Rio Grande Railway reached Redcliff on November 20, 1881, and quickly extended through Eagle River Canyon, with stations at Belden, below the Gilman town site, and at Minturn. Development surged in 1882 and Redcliff quickly became Battle Mountain's first boomtown, with two saloons, several hotels, an opera house, and several other businesses.⁵

The first wave of Battle Mountain prospectors explored the region rapidly. In an early history of Gilman, written around 1939, Ole A. Gustafson offered a rare glimpse into the allure of getting there first in his description of the Iron Mask

Mine in its initial phase of development:

In the upper portion were found caves large enough for a camp meeting, containing various grotesque and beautiful crystallizations, supplemented by solid ore bodies, glistening in the glare of the candles, making a veritable Arabian Nights entertainment, suggesting a desire in the minds of the explorers to become a possessor of only a small portion of such a mint of precious metals.

The dream may have been a romantic one, but many of the early prospectors likely enjoyed the thrill of the chase more than the fruition. Most profitable claims were quickly sold to mining entrepreneurs for far less than they were worth.⁶

Shortly after the arrival of the first prospectors, a triumvirate consisting of Walter Scott Cheesman, a Chicago emigrant turned Denver railroad and utilities tycoon; Judge D. D. Belden, a prominent Redcliff citizen; and G. W. Clayton gained control over many of Battle Mountain's most promising properties, including the Cleveland Group, the Eagle Bird Group, and the Belden Mine. Several other early mine owners and prominent Battle Mountain citizens were eastern capitalists, among them Iron Mask Mine superintendent Henry M. Gilman. These men invested a tremendous amount of money into consolidated mining enterprises and, in turn, spurred the growth of several early Battle Mountain communities.⁷

Between 1880 and 1884, Battle Mountain mines produced \$1,933,884 in metals. A significant portion of this output was derived from properties near the Clinton and Rock Creek town sites in present-day upper and lower Gilman respectively. Mines such as the Little Chief, Iron Mask, Belden, and Black Iron, which became the core components of the Eagle Mine, produced ores with significant lead and silver concentrations. Growth in production led to urban devel-

opment. The first building in Clinton, a saloon, was built in 1884, and the mining camp quickly grew into a town.⁸

In 1885, quartzite beds containing gold and silver deposits were discovered in several Battle Mountain claims, the most famous of which was the Ground Hog. A year later frenzy swept through the region. Rumors of gold fortunes were exaggerated, but the Battle Mountain bonanza was real. Between 1885 and 1889, Battle Mountain produced \$910,333 in gold and \$2,808,329 in total mineral revenue. In 1886, the Iron Mask Mine began shipping over a hundred tons of ore per day after constructing the first tramway on the slope of Battle Mountain, to connect the mine with the railroad at the bottom of Eagle Canyon. During that same year, the Colorado state inspector of mines estimated that the Iron Mask contained 100,000 tons of ore worth \$3,482,000, and the mine's workforce of fewer than eighty employees doubled in two weeks. It was this combination of speculation and production that precipitated Clinton's transformation from mining camp into Battle Mountain's second boomtown.⁹

The Clinton post office was established in 1886, and the town subsequently renamed Gilman to avoid the chance of confusion with Clinton, California. The name honored Henry Gilman, who had donated land for a schoolhouse and served as president of the first school board. By late 1887, Gilman had a business district that included at least one hotel, a general store, a billiard hall, a sampling room used to test the mineral content of ores, a newspaper—*The Enterprise*—and several saloons. This marked Gilman's first peak in activity. The population during those years is difficult to determine, but as many as 1,655 persons may have lived in Gilman in 1885 or 1886. The 1890 census indicates a sharp decline to 442.¹⁰

During Gilman's first boom, Irish, Swedes, and some Chinese and Italians who originally came into town as railroad workers, were the primary labor source in its mines. These early miners risked their lives to extract the mineral treasure of

Battle Mountain.¹¹

One early Gilman history—written by G. H. F. Meyer of the Gilman Mining Company, which owned the Little Chief Mine from 1889 to 1913—reveals that many mines had already reached one thousand feet before the silver panic of 1893. This was the average maximum depth from which easily processed silver-lead oxidized ores could be retrieved in the Gilman properties. According to Meyer, the Gilman Mining Company reached a depth of 1,850 feet by 1892, well below the water table, in the belief that they were on the verge of reaching a “big body of smelting ore,” rich in gold and silver. After sixty thousand dollars spent in digging and drainage, the project ended as “a personal catastrophe to the chief parties.”¹²

Above ground, life in Gilman during the 1880s remained every bit as precarious as it was in the mines. Thompson describes a prevalent group of “Rowdies,” or “Rough Riders,” who would “ride right into a saloon on horseback,” and sometimes “shoot out the town lights if the notion took them.” Several contemporary newspaper clippings from Redcliff or Gilman, probably from the *Enterprise* or the *Eagle River Shaft*, likewise demonstrated pervasive banditry and violence, and called for enhanced law enforcement.¹³

Fire danger, caused by a combination of rapid town growth, high winds, and a lack of water, made life in Gilman even more volatile. Accidents involving lighted candles sometimes led to catastrophe. One fire, in 1899, burned down half of Gilman's business district, including the Iron Mask Hotel, the schoolhouse, the shaft house of the Little Bell Mine, and several stores. A year later another fire nearly incinerated the entire town. Determined inhabitants quickly rebuilt destroyed portions of the town with significant improvements, but if Gilman's new veneer made the town look stable, it was only a facade masking a collapsed economy. The silver crash of 1893 had caused an immediate cessation of most metal mining throughout Colorado, and operations at Gil-



The morning after the 1899 fire in Gilman, which destroyed approximately half of the town. The Fleck Clothing Store is at the left of the photo and is marked with an "X". People standing survey the damage. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

man would not resume fully for twenty years.¹⁴

Gilman in Limbo, 1893-1913

Leadville emerged as the first mining district in Colorado to adapt to the rising demand for zinc in 1901, when the Guggenheims and their associates created the United States Zinc Company, a subsidiary of their American Smelting and Refining Company. With one million dollars in capital, the company built a new plant that refined sulfide ores from the Ibex, A. Y. Minnie, and Yak properties into a compound known as spelter, which averaged 88 percent zinc. Leadville dominated Colorado's zinc production during the first two decades of the twentieth century. Gilman was slow to catch on, remaining idle for twelve years following the silver crash.¹⁵

Most miners left their Battle Mountain com-

munities after the mines closed, but corporations began to acquire properties shortly after the crash. Subsequently, the focus shifted from mining silver-lead carbonates to the more complex and costly mass production of sulfide ores. Among the new corporate players were the American National Bank of Leadville, Colorado Fuel and Iron Company, and the American Zinc Company. Around the turn of the century the demand for zinc rose considerably and some smelting corporations that had previously penalized ores containing small quantities of the metal began to take a new interest in it.¹⁶

In 1905, The Eagle Milling and Mining Company reopened the Iron Mask Mine with a new emphasis on zinc production. During the same year the company constructed a 150-ton roaster and magnetic separator, and the mine gradually became a major producer of zinc concentrate. The

Iron Mask and Black Iron mines also produced about two hundred thousand tons of manganiferous iron ore from the 1890s through the early 1900s. This was initially shipped to CF&I's steel plant in Pueblo, Colorado, and later to smelters as fluxing ore.¹⁷

Despite assays that measured the zinc content in various Gilman ores as anywhere between 6.7 and 18.7 percent, some corporations evaluating Battle Mountain properties in the early 1900s remained skeptical of zinc's profitability. But from 1910 to 1913, American Zinc Company engaged in a series of negotiations with business owners from Denver, Leadville, and the East Coast to consolidate a number of Gilman properties.¹⁸

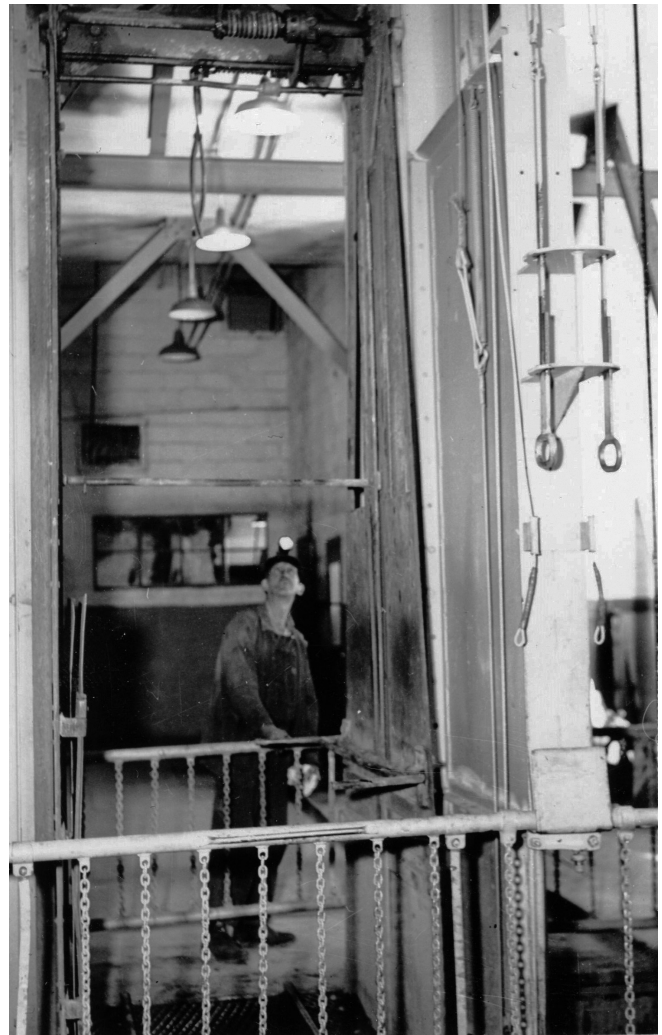
American Zinc was enthusiastic about the assays of sulfide ores, but recognized that there were no mills available for lease or purchase on Battle Mountain that could adequately separate fine or even course particles. When a company executive sent assays to potential investor A. M. Plumb, Plumb responded that

crude ore showing 11.5% zinc and practically no gold or silver ... seems to me a pretty lean proposition, as I don't see any way to make more than \$7.00 per ton gross out of this ore with the very best separation[,] which would not make it a profitable proposition.

Meyer, of Gilman Mining Company, concluded his brief history of the Little Chief Mine with a similar sentiment: "Now along comes this new zinc interest and that is the only matter talked about. I personally believe there is \$5.00 worth of gold and silver for every \$1.00 in zinc in our ground." In short, this dis-

course represented both a willingness to embrace a future for Battle Mountain as a mechanized mass producer of zinc and an apprehension to invest in that new economic frontier.¹⁹

Unfortunately, while American Zinc was making its bids and devising its strategies, Gilman miners were losing their jobs, along with any remaining autonomy from the age of smaller claims. Resentment among the few remaining Battle Mountain workers peaked when CF&I claimed that the Panic of 1907 left it unable to pay its employees in cash. This precipitated the first instance of labor strife in the Battle Mountain region, with workers refusing to accept scrip payment redeemable in ninety days. Eventually the company and its employees reached an agreement that secured



The main shaft at the Gilman Mine with Mayo Lanning, mine chief, inspecting. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

A miner's helper assists with tamping dynamite prior to blasting the exposed rock face. Each miner has a lamp connected by wire to a battery at his waist. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)



Flotation stations in the zinc section of the mill at Gilman. The flotation stations were part of the process of refining the zinc ore. The flotation mill was installed in 1929. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)



credit for workers from local merchants.²⁰

By that point Colorado Fuel and Iron, and the American mining and smelting industries generally, had been forced to recognize unions as a growing and formidable threat. Major strikes over payment in scrip, wage rates, denial of the eight-hour work day, mine safety concerns, and other issues erupted in Colorado in 1884-85, 1894, 1896-97, 1899, and 1903-04, with the coal union the United Mine Workers of America and the more radical hard rock- and smelting-based Western Federation of Miners as the main agitators.²¹

Sabotage, militancy, and growing public support for benefits such as the eight-hour day posed a significant problem for the anti-union Mine Owners' Association. To make matters worse, company towns established in the southern Colorado coalfields as a solution to militancy only enhanced resentment among workers. But while Ludlow, Colorado, became the focal point in the 1913-14 war between capitalists and unions, in those same years New Jersey Zinc Company was quietly consolidating Battle Mountain's most valuable metal mines into a monolith that would support Colorado's most stable and enduring company town.²²

The New Jersey Zinc Years, 1912-1977

Under the ownership of the Empire Zinc division of New Jersey Zinc Company—which bought nearly every significant mining property on Battle Mountain between 1912 and 1915—Gilman epitomized the transformation from frontier to corporate mining involving huge capital investment, vertical and horizontal integration, and extensive labor specialization and managerial control. New Jersey Zinc formed Empire Zinc in 1902 to search for and develop zinc mines in the West, and at one time or another the subsidiary owned properties in Colorado, New Mexico, Arizona, Nevada, and Mexico.²³

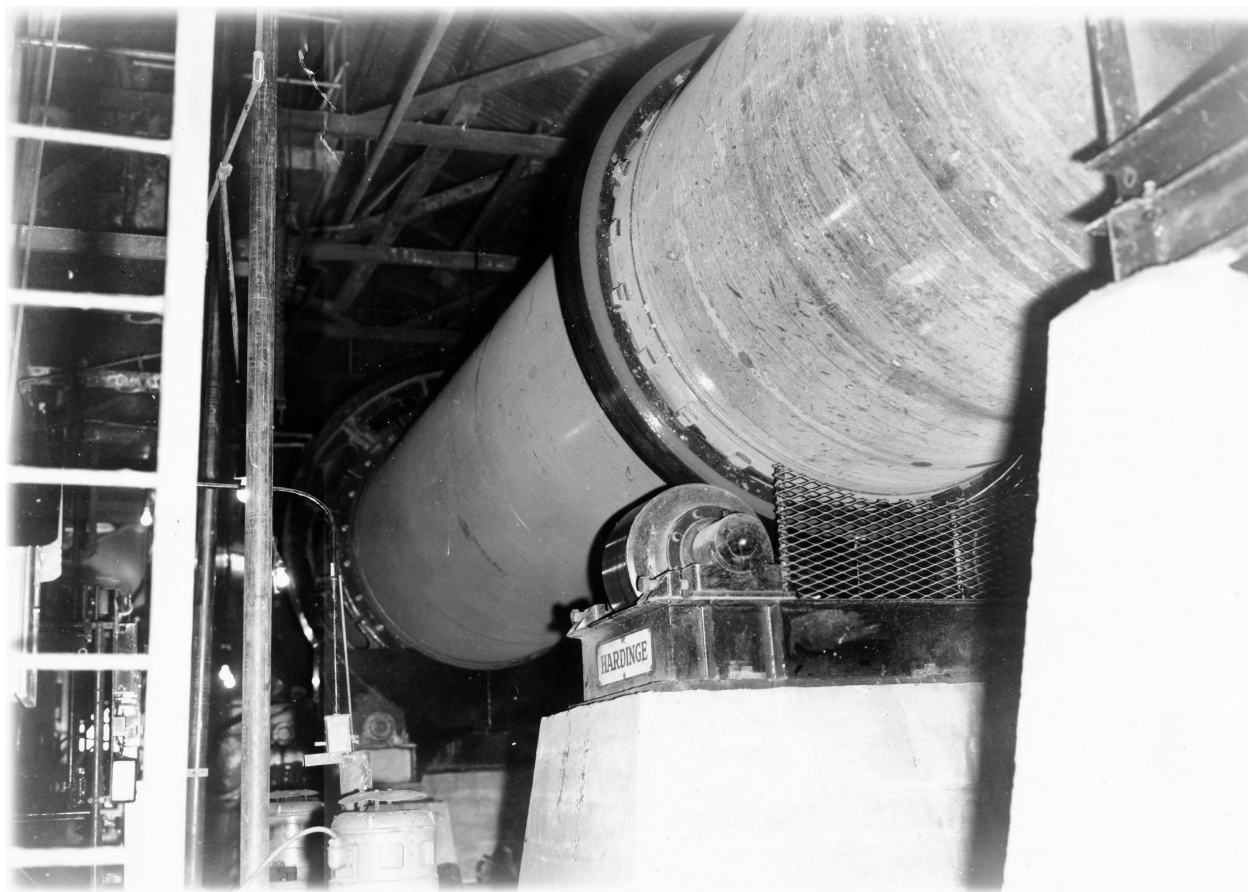
In 1913, Empire Zinc purchased the Belden Mine and several other properties in Gilman,

outbidding American Zinc. As of January 1914, the Iron Mask Mine, known by American Zinc to contain the largest body of zinc ore opened in the state of Colorado, was still up for grabs. American Zinc executive Walter G. Stuart remained optimistic that his company could still acquire the mine, but the following year Empire Zinc successfully completed its long campaign to monopolize Gilman by purchasing the Iron Mask from Eagle Milling and Mining Company.²⁴

Under Empire Zinc, the Gilman mining district reached a new peak in production revenue during World War I, with \$9,208,005 in zinc and \$10,936,710 in total ore value from 1915 to 1919. The Eagle Mine struggled during the 1920s, along with Leadville and the greater nonferrous metals industry, due to a steep decline in the price of zinc. In 1919, the Eagle Mine closed briefly for the first and only time during its Empire Zinc years. Zinc tonnage dropped by about 20 percent and the annual value of the principle ore fell by nearly half from 1920 through 1924.²⁵

During the late 1920s, chimney ores with pyrite cores rich in copper, silver, and gold were discovered near the lower end of the mantos in the Eagle Mine. The significant concentrations of precious metals in these ores allowed Empire Zinc to adapt to a nearly 50 percent decline in zinc prices from 1930 to 1932 by suspending zinc production between 1931 and 1940 and drastically increasing gold, silver, and copper output. The Eagle Mine produced nearly \$28 million in precious metals from 1935 to 1939 inclusive.²⁶

Zinc and copper prices bottomed out in 1932. Industrial mining virtually ceased in Colorado during the Great Depression, but unlike similar mechanized mines such as Climax Molybdenum, the Eagle Mine had no temporary closures. Empire Zinc did lay off many single employees and cut the hours and wages of remaining workers, but comparatively speaking, the Eagle Mine was quite successful during the Great Depression, producing 85 percent of Colorado's copper and 65 percent of its silver. In 1933, the company recalled many of



Part of the zinc dryer system at the mill in Gilman. The dryer was heated by a firebox under the rotating cylinder. Tumbling action of the dryer coupled with full length fins dried the zinc for loading into rail cars. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

Gilman's laid-off workers. Miners returned with a base pay of \$3.50, about 25 cents below prevailing wage for metal mining, but could also earn considerably more through a profit-sharing program that paid \$5 to \$6 dollars a day if they exceeded their quota. By 1939, the company was remodeling Gilman's mill to restart production of zinc. Within a few years that metal was again the Eagle Mine's primary source of revenue due to demand for zinc for the vital brass alloy used in shell casing and other war products.²⁷

The Eagle Mine's production of precious metals briefly declined during the mid- to late 1940s, but during this period Gilman's mining district produced over \$20 million worth of New Jersey Zinc's industry-leading Horsehead brand zinc.

The U.S. military's demand for zinc remained strong throughout the 1950s and 1960s, but a significant portion of the Eagle Mine's principal mineral was also used to generate a higher standard of modern living for Americans.²⁸

Zinc is essential to numerous consumer goods. Zinc pigments enhanced color and durability in paint. Slab zinc goes into brass household products and plumbing equipment and is used to galvanize steel for rust-resistant construction products. Pharmaceutical zinc oxide is an astringent in ointments and cosmetics. Lithopone, a white pigment containing zinc sulfate, is used in linoleum. Rolled zinc and metal powders are used to produce a variety of other products. Most importantly, zinc was integral to the monumental



A conveyor unloading zinc from the dryer at Belden. The zinc went to the tipples to be loaded on railcars. Durbin McIlroy is monitoring the process photographed by Byron Stanley. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

success of the U.S. auto industry during the 1950s. Much of the Eagle Mine's zinc was converted into dye castings for radiator grilles, fuel pumps, and other car parts.²⁹

By 1951, the Eagle Mine was one of America's leading producers of zinc, with twenty three hundred tons of concentrate being shipped every month to a company-owned roasting plant in Cañon City, Colorado, and then to New Jersey Zinc smelters in Depue, Illinois, or Palmerton, Pennsylvania. Production revenues peaked at \$44,094,729 in the period from 1951 through 1954—\$32,822,268 from zinc—and remained consistent throughout the 1960s.³⁰

The success of the Eagle Mine was largely due to great capital investment, rapid expansion, and occupational specialization. In 1919, Em-

pire Zinc removed the Eagle Mining and Milling Company's original mill from Belden, replacing it with a more modern, efficient, and cost effective underground flotation mill in 1929. The new plant stood out as the only underground mill in mining history. The 1920s also marked the beginning of the significant increase in the size and depth of the Eagle Mine. Between 1923 and 1951, forty-five new tunnels were excavated and the deepest workings reached 2,800 feet below the upper slopes of Battle Mountain.

Enhanced accountability and efficiency were necessary in order for these enormous investments to be fruitful and Empire Zinc achieved these through the implementation of rigid labor divisions. By 1948, the Eagle Mine had eight major divisions: Mine, Milling, Plant, Engineering

and Geology, Service (laboratory), Safety, Hospital, and Office. Each of these departments had numerous subdivisions of labor.³¹

Although miners eventually excavated to the 2800 level, the most valuable ores mined during the Empire Zinc years came from the 1400 through 2000 levels. After crushing, the ore passed over conveyor belts to flotation cells used to extract various metals. From there, lead, silver, and gold were pumped into lead tanks and zinc was pumped into its own tank, with additional chemical treatments required in each section. Concentrates were transported from the underground mill through the Newhouse Tunnel, which led to the Belden railroad station. At Belden concentrates were sent to a dryer, while tailings were pumped into a pipeline that ran from Belden to a pond at the base of Battle Mountain. Thus zinc mining during the middle part of the twentieth century functioned like a multi-layered assembly line.³²

Gilman, Colorado, Company Town

Efficiency was an essential part of Gilman's longstanding commercial success as a company town under Empire Zinc, but self-sufficiency was of equal importance. All of the raw steel and timber used for construction and repairs inside the Eagle Mine was customized in Gilman. The lathe, welding, and blacksmith shops located near the flotation mill were used to repair the mine's machines and rail cars.³³

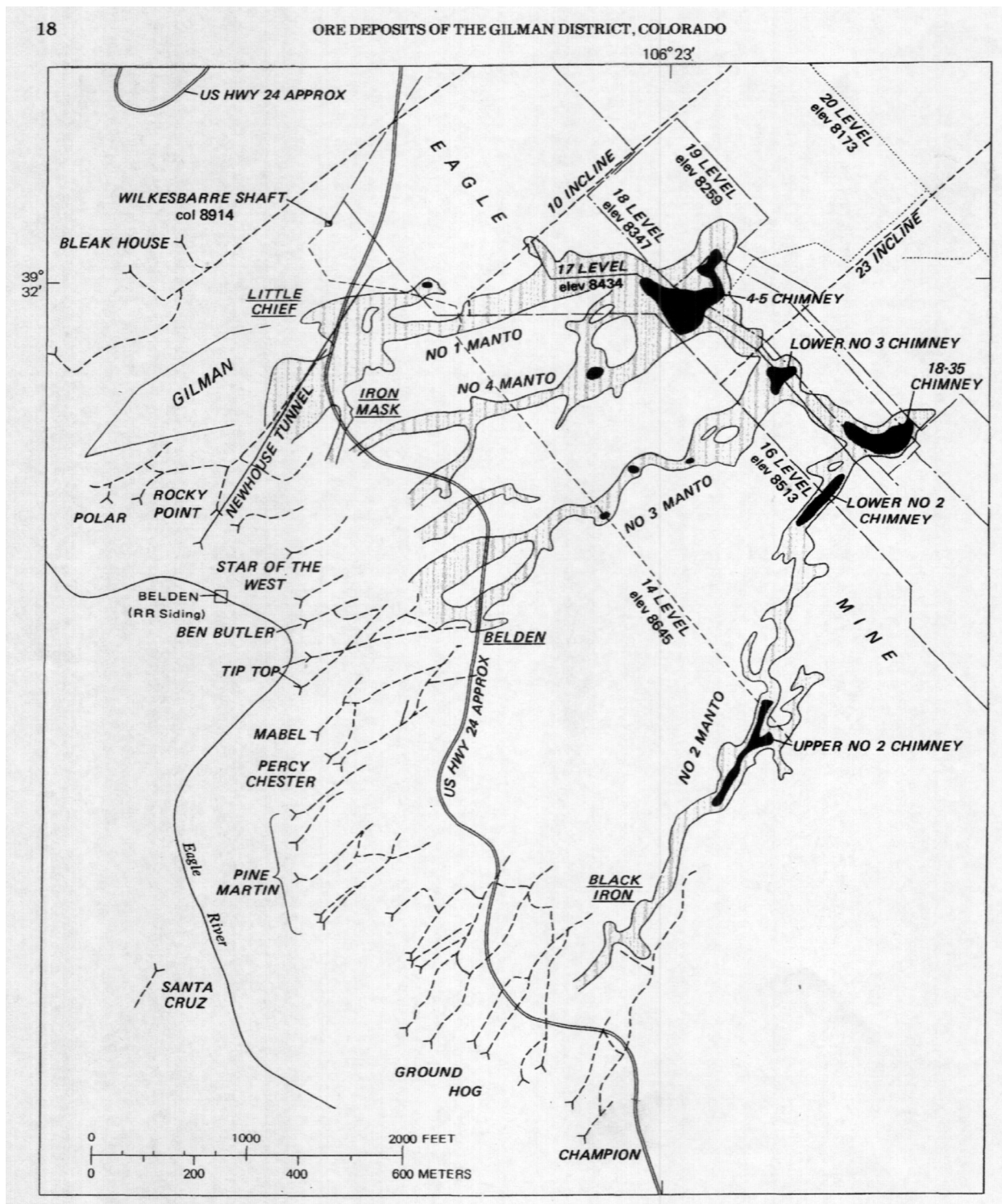
During the Empire Zinc years, Gilman was also largely self-sufficient outside of the mine. By 1919, the company had erected dozens of uniform houses placed in rows down the hill from the shaft house. They had a utilitarian appearance, with black tarpaper roofs and grey paint, but were well insulated and had electricity and hot water. In her memoir, *A Gilman Girlhood*, Vesta Coursen wrote: "We had to come out to the wilds of Colorado to find modern improvements such as we had not enjoyed in the civilized East!" By 1936,

Gilman had eighty-five houses, fifty of which were modern cottages. Empire Zinc removed almost all the old remnants of Gilman's past by buying and tearing down all the remaining cabins in the Rock Creek area, the lower portion of the Gilman settlement.³⁴

Unlike Empire Zinc's semi-company town in Hanover, New Mexico, the company maintained total ownership of Gilman. It owned all of the town's housing, the public school building, the post office property, and all of the town's retail space, which it rented out with water and sewage included in the rent. The company built a two-story clubhouse, with a pool hall, basketball court, and library-lounge, that served as the hub for recreation. Empire Zinc closed the clubhouse during the Depression, but reopened it after World War II with a new dance floor, a modern kitchen, and a bowling alley—the only one in Eagle County. The company also built a hospital around 1920 by consolidating two residential box-type houses with a hallway.³⁵

Empire Zinc didn't just own Gilman's properties; it organized many aspects of life for Gilman's residents. It controlled the school board by appointing members from its own ranks. The company also provided the town's entertainment, screening Hollywood movies in the clubhouse. Most importantly, it provided high-quality healthcare for all employees and their families throughout most of Gilman's Empire Zinc period. All company employees paid into a plan that covered medical expenses at the company hospital for workers and their families.³⁶

Empire Zinc's corporate welfare program at Gilman was more extensive than those of many metal-mining company towns of the twentieth century, but its scope was not unique. American Zinc Company, for example, maintained complete ownership of Mascot, Tennessee, from 1911 through 1964. As at Gilman, the company provided modern housing for employees and families, a company health plan, a library, a movie theater, and a Great Depression-era profit-sharing



Ore bodies and key workings of the Eagle Mine, general location of chief mines (underlined) in Leadville Dolomite before consolidation into the Eagle Mine, and locations and generalized outlines of main workings in mines in Swatch Quartzite and Precambrian rocks (short-dashed lines). (Thomas S. Lovering, Ogden Tweto, T. G. Lovering, Ore Deposits of the Gilman District, Eagle County, Colorado: Geological Survey Professional Paper 1017 (Washington, D. C.: USGPO, 1978).)

program known as Industrial Democracy.³⁷

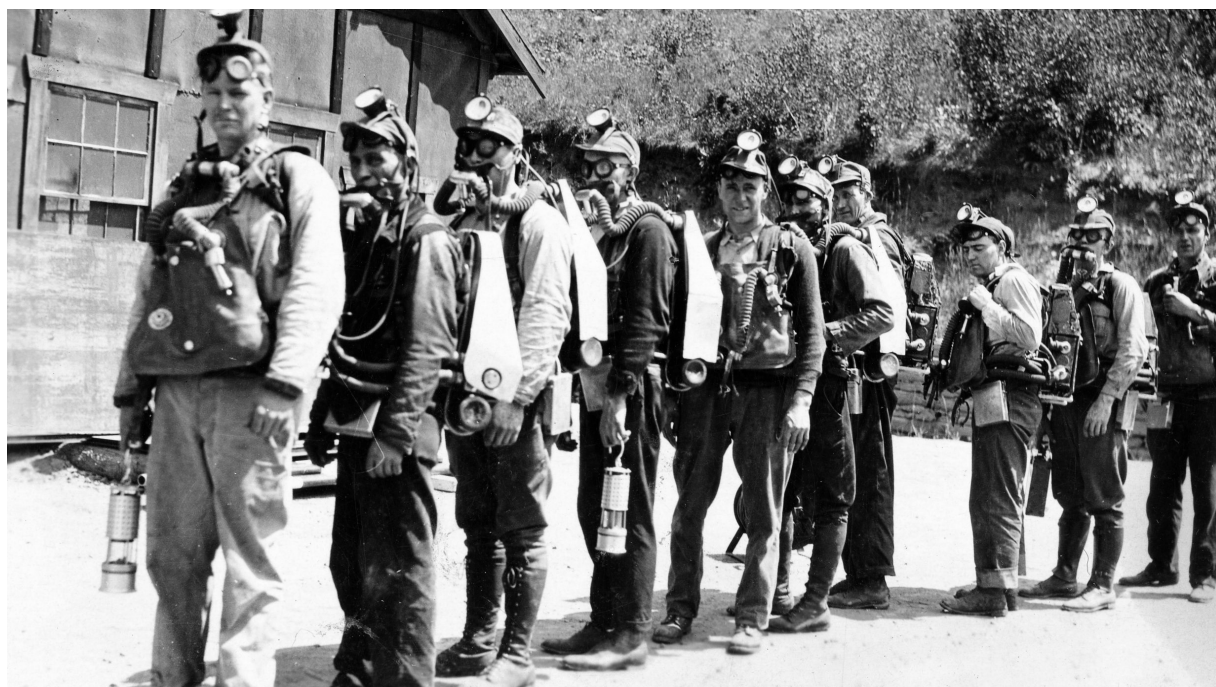
Yet by 1921, employee discontent was mounting in tandem with declining company profits, and in 1935 Mascot miners struck over collective bargaining rights and pay rates in solidarity with Fairmont, Illinois, smelter workers, who had established a charter with the International Union of Mine Mill and Smelter Workers, the former Western Federation of Miners. Many large zinc companies in the United States had been unionized as early as World War I, and though several unions were seriously weakened during the post-war decade, revitalized militancy became a widespread and vexing problem for nearly all American industries during the Great Depression.³⁸

Most early experiments in corporate paternalism, such as George Pullman's town for railroad car construction on the outskirts of Chicago, failed to contain militancy or quell unionism, and by the turn of the twentieth century most mining company towns, both hard rock and coal, had earned a

reputation as sordid instruments of exploitation. Yet for an astonishing thirty-five years, from 1915 to 1950, Gilman resisted the general tendency toward rebellion. Since Empire Zinc did cut hours and wages during the Great Depression, the Eagle Mine's disproportionate success during this period cannot fully explain the town's longstanding social stability. A more rounded explanation requires a closer look at Empire Zinc's success in gaining the loyalty of the Gilman community through its commitment to health and safety, and at the Gilman community's remarkable capability for group and individual autonomy despite the constraints of corporate welfare.³⁹

Health and Safety

Modernization of the Eagle Mine did not always diminish the pre-existing dangers of mining, and in some cases it introduced new ones. Workers in the electrical shop used an acetylene torch,



Ten members of the mine rescue team for the New Jersey Zinc Co. at Gilman, Colorado in the mid-1930s. They are standing at the main shaft house wearing head lamps and breathing apparatus. Standing fourth from the right is Joel Hendrickson, third from the right is Frank McDonald. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.)

which often came into contact with ore and emitted a white smoke. Mid-twentieth century shift boss William Burnett claimed that “breathing this would make you very sick, and the ore was on everything and in every place.” Burnett also described how two men, Dwight Castro and Albert Gustafson, working the day shift during the remodeling of the crusher machine, accidentally chipped into live explosives, which exploded and caused them partial blindness. Men in other departments experienced a myriad of potential daily hazards as well, none more so than the miners, who lived with the constant threat of cave-ins, falling debris, misfires, and deafness from blasting. Working in this environment meant that health and safety policies were no trifling concern for Gilman residents. Thus, the company’s willingness and ability to exceed the industry’s health and safety standards was likely a key factor in the town’s unusually long period of social stability.⁴⁰

In a 1948 promotional pamphlet entitled *On the Job at Gilman*, the company promoted health and safety as a primary goal. This was more than corporate propaganda. Mineworker and local historian Ole Gustafson wrote: “The Company is aggressive in maintaining safe conditions both in the camp and underground [*sic*]. . . . Safe working is considered a major part of the operating problem, and is an essential requirement.” Burnett corroborated Gustafson’s assessment by praising the company for the mine’s ventilation system, safety classes, first aid stations in each area, and for quarantining areas with toxic gas.⁴¹

Outside observers commended the company as well. In 1950, New Jersey Zinc invited *Rocky Mountain News* writer Bill Brenneman to tour the Eagle Mine. He described dry, well-lit tunnels with plenty of fresh air and efficient drainage systems. His guide, Mine Superintendent William Jude, commented “we have a complete ventilation system. . . . The air in all the 85 miles of tunnels changes all the time.” As of 1939, temperatures at the lowest levels of the Eagle Mine did not exceed 83 degrees and small blowers served as auxiliary

ventilation in areas without natural draft.⁴²

The Eagle Mine was also the first metal mine in Colorado to have a rescue team. In a 1975 article for the *Vail Trail*, Rusty Pierce pointed out that the Eagle team rescued miners in Georgetown and Climax because those mines did not have teams of their own. Accidents did happen, of course, and were occasionally fatal. But to its credit, the Eagle Mine’s Safety Department conducted accident investigations, which led to strategic improvements.

This commitment often saved lives. In the mine’s first major fire, which occurred in 1932, the company extinguished the blaze by resorting to flooding, which wrecked the mine. Several other fires took place from 1932 to 1975, but the company dealt with most of them by sealing off the affected area, permitting the remainder of the mine to continue normal operations. Cave-ins were also an occasional but serious problem. In 1924, five miners were trapped for seventy-seven hours when one entire side of a stope caved in. After a four-day effort headed by mine foreman Frank Maloit, all five were rescued.⁴³

Outside the mine, many Gilman residents made friends with their doctors, several remembering Bert Nutting fondly. Burnett described another company doctor as being “as good as they came when it came to sewing up wounds and setting bones,” and “all for the miner down in the mine.” People in Gilman also formed bonds across divides of race and class at work, school, and play. These ties often made residents feel more engaged in their community than trapped by it.⁴⁴

The Gilman Community

Residents found all kinds of ways to entertain themselves in Gilman during the Empire Zinc years. Burnett remembered a chipmunk amusement park, with slides, swings, and exercise wheels, built by men at the Belden compressor station. Coursen described a strange Friday tradition in the Gilman grade school during the early

1920s known as a peanut shower, in which children pelted their teacher with peanuts and then ate them off of the floor. These were only two of the bizarre manifestations indicative of a town largely cut off from the outside world.⁴⁵

The clubhouse often brought the whole Gilman community together. Entire families showed up to monthly dances, babies whined and fell asleep, adolescents chased each other around the dance floor, and young women sat on chairs on the fringes of the auditorium waiting for single men to invite them to dance. On some cold winter evenings, singles would gather in the clubhouse for sing-a-longs during raging blizzards. Throughout the 1920s, the community engaged in an elaborate annual Christmas celebration that required a week of planning. School children made decorations in their arts and crafts classes and practiced singing Christmas carols. Men mounted an enormous spruce tree on the stage of the clubhouse and housewives trimmed it. According to Gilman school teacher Olive Cryan, every child received a stocking and a myriad of “first rate gifts,” including Flexible Flyer sleds, dolls, doll carriages, steam

engines, train sets, and more. Families paid what they could and Empire Zinc covered the rest. The prevalence of self-contained entertainment in Gilman receded after 1929, when Highway 24 became open year-round, but a deep sense of town pride lasted into the 1950s.⁴⁶

During the winter, children and young adults plunged down the steep hillsides around Gilman on cardboard, garbage can lids, coal shovels, sleds, and toboggans, sometimes all the way to the base of Battle Mountain. Skiing was also a common wintertime activity. At least two decades before Camp Hale was established, and four before Tenth Mountain Division veterans Peter W. Seibert and Robert Parker established Vail in 1962, Scandinavian workers introduced skiing to the Gilman community. What followed was a unique and elaborate ski culture. Cryan’s description of Gilman’s early ski culture shows that skiing was far more than a hobby in Gilman:

Ambitious and ingenious young men fashioned a fast downhill run beginning at the school, straight down Main Street



Tom Garnett (far left) and neighborhood children posed in front of their packing crate clubhouse in Gilman, Colorado. (Courtesy of the Eagle County Historical Society, Eagle Valley Library District.

to the Club House and even built snow packed jumps to heighten the thrill. No fancy boots, plain wooden pine or ash skis [without edges or bindings], poles made with broomsticks rammed through coffee can lids served the purpose. A contest was held with prizes offered by the merchants and community members. The whole town lined the streets to watch and cheer the jumpers on.

This account indicates that insularity in a remote Rocky Mountain environment gave the Gilman community distinctive qualities. But on the town's margins, traces of rugged individualism remained into the middle part of the twentieth century and perhaps beyond.⁴⁷

Burnett described a rugged, one-eyed man named Charlie Eicker, who lived in a one-room cabin in Eagle River Canyon and continued to work his own claims into the 1930s. Burnett also told the story of former Gilman miner and later Redcliff resident Johnny "Frenchy" Tatreau, who dared to crawl around in small abandoned mining claims around Battle Mountain with a powder box and apparently got "quite a bit of high-grade gold out of his efforts." These old time mountain men were not the only ones who escaped the monotonous and standardized reality of a twentieth-century company town. In their spare time, Gilman residents often left modern convenience and uniformity behind to find adventure and inspiration in the Rocky Mountains.⁴⁸

No shortage of unspoiled wilderness lay around Gilman for hunters, anglers, and hikers to enjoy. Multi-day camping trips for recreation, solitude, and spiritual retreat were common. In 1927, some Gilman residents climbed nearby Notch Mountain in the first annual pilgrimage to view the Mount of the Holy Cross, a Colorado fourteener emblazoned with a cross of snow that had long served as a symbol of western romanticism, Christianity, and manifest destiny.⁴⁹

Multi-day camping trips also served as a rite

of passage for children. Robert Maloit, who lived in Gilman from 1922 through 1933, described a typical adolescent adventure with his friends: "We would shoulder our packs with a small tent, blanket, minimum food supplies—usually flour, salt, pepper, hard biscuit, bacon, sugar, coffee and bullion cubes. We trusted in our fishing gear and a .22 rifle and our tender age filled with optimism to provide food and survive."⁵⁰

Gilman women engaged in many of the same outdoor activities, with the likely exception of hunting, and girls apparently experienced a similar rite of passage. Vesta Coursen described one all-girl camp-out that bore obvious similarity to Maloit's: "We'd cooked over smoking fires, fished, hiked, been soaked in the rain and the lake, had sat up all night laughing ourselves weak, and had generally had a wonderful time." Coursen's girlhood experience in Gilman included adventures such as getting chased by a bull, getting into fist fights with other girls, and exploring abandoned ore cars and machinery, all of which were atypical for young girls during the 1920s. Her description of a disorienting trip to Denver demonstrates how her rugged mountain life had blurred mainstream gender roles: "Boys teased me, and in the city I was defenseless and unsure of myself. In Gilman I would have got down on the floor and rough housed with Shep [her neighbor's dog] or dashed out the door and down the hill. But suddenly I was supposed to behave like a lady, and I didn't know what to do except sit and look at my new shoes."⁵¹

Clearly, Gilman defied the stereotype of the dystopian company town. It was a town where residents had both internal and external releases from the harsh realities of the Eagle Mine and the grip of Empire Zinc. But a unique culture of modern living, community pride, and rugged individualism could not alleviate contentions rooted in disparities of class and race, nor could exemplary health and safety standards. A reckoning was forthcoming.

Class, Race, and Unionization

Jean Elbert Cryan provided some valuable insight into how corporate paternalism kept the community together. She claimed that part of the reason why Gilman remained stable for as long as it did was because of the “relative homogeneity of income and the fact that no one owned property in this company town, a kind of equalizer for us.”

There is some truth to this. Even Frank Maloit, the longstanding mine foreman, mine chief, superintendent, general superintendent, and finally Western Manager of Mines for New Jersey Zinc, lived with his wife and three children amongst his employees in a modest company-owned, three-bedroom house that lacked central heat until 1940. His son, Robert Maloit, shoveled dirt with the surface gang in 1933.

But there was poverty in Gilman. Olive Cryan recalled that during her years as a teacher in the Gilman grade school, children frequently came to school in tears during the winter because their parents could not afford adequate footwear. On one occasion she bought a snowsuit, cap, and mittens for a poor student with tuberculosis.⁵²

Some resentment certainly existed amongst Gilman’s workers and their families toward the mine’s staff during the early decades of the Empire Zinc period, particularly over staff housing for department heads, which was located on the top of the eastern hillside above a series of job-specific rows of employee houses. Jealousies were common and to be expected in any small town, but class division in Gilman was a real problem that lurked underneath the image of an ideal company town. Cryan characterized Rock Creek, which comprised the bottom portion of employee housing as “a barrio or a slum by today’s standards.”⁵³

Ethnic discrimination existed at Gilman, as it did at most other company mining towns in the western United States and Mexico in the twentieth century. Empire Zinc had a policy of rigid housing segregation in Hanover, New Mexico, and in Gilman, common in southwestern mining

towns. Historically, most persons of Mexican descent lived in Rock Creek and were not allowed to move into better quality houses on the hillside until white families moved out. The company also used a dual-wage system pervasive in the Southwest. It restricted Mexican and Mexican-American workers to the most strenuous, dangerous, and lowest-paying jobs in the Eagle Mine, while Gilman’s white workers often moved up the corporate ladder after gaining experience and seniority.⁵⁴

A disproportionate percentage of the Eagle Mine’s Mexican workers were miners. A 1948 New Jersey Zinc promotional pamphlet, *On the Job at Gilman*, has four pages of illustrations in the mining section showing Gilman miners at work and referencing them by name. Of the eighty-six miners photographed, seventy-four were of Mexican descent. The milling section was more evenly balanced, although all technical work, such as repairs, appears to have been done by white workers, which was also true for the plant section. Photos of the mine rescue team show ten Mexican workers and four whites, but all four of the white employees are listed as managers. One Mexican employee was photographed in the assay office. He was cleaning a pulverizing machine.⁵⁵

Mexicans began to settle in Gilman in 1926, when two brothers, the Boyds, who worked for Empire Zinc, began recruiting them. According to former Redcliff mayor Manuel Martinez, who began working in the Eagle Mine in 1943, Mexican workers at first were happy to have a job and an income, but later became increasingly aware that they were being shut out of higher paying jobs. Mexicans in Gilman became more vocal about their rights as employees during the 1950s, when the International Union of Mine, Mill, and Smelter Workers, known at the time as Mine-Mill, began organizing Gilman’s workers.⁵⁶

In 1934, Mine-Mill abandoned its anti-Mexican policy and increasingly became a communist-controlled union. The shift resonated in the southwest and attracted Mexican workers who in-

creasingly allied themselves with communist-led labor unions, since those organizations were the only ones willing to fight for them. It also opened the door for united Anglo and Mexican union drives. Company towns in Grant County, New Mexico, signed charters with Mine-Mill in 1934, and by 1942 the union had established a Southwest Industrial Council, with dozens of organizers in Arizona, New Mexico, and Texas. During that same year Empire Zinc mine workers signed a contract with Mine-Mill in Hanover, New Mexico.⁵⁷

Eight years later Hanover miners struck after the company rejected their demands for collar-to-collar pay, paid holidays, wages matching Grant County district standards, and a reduction of the job classifications that miners believed the company was using to trap Mexicans in unskilled labor. After nine months of uneventful picketing, Empire Zinc got a court injunction that forced miners to cease their activities or face imprisonment. Wives took over and held the picket line for six months and in January of 1952, miners won wage increases and other benefits, including improved housing. Mine-Mill ran firmly against the cultural grain as a radical communist union during the early 1950s, but this strike, which inspired the film *Salt of the Earth* (1954), reverberated across the Southwest and coincided with unionization in Gilman.⁵⁸

Mine-Mill began to organize in Gilman around 1950. During that time, Mine-Mill convinced most Gilman employees that the union meant better wages, health insurance, and improved working conditions. Sometime during the early 1950s, workers voted to approve a Mine-Mill charter, which a significant minority opposed. The union bought a building, Carlson Hall in Redcliff, and stewards were elected to represent all departments in negotiations with Empire Zinc's management.⁵⁹

The newly unionized labor force demanded a new contract that included a ten-cent-an-hour raise for all workers, a separate health clinic with

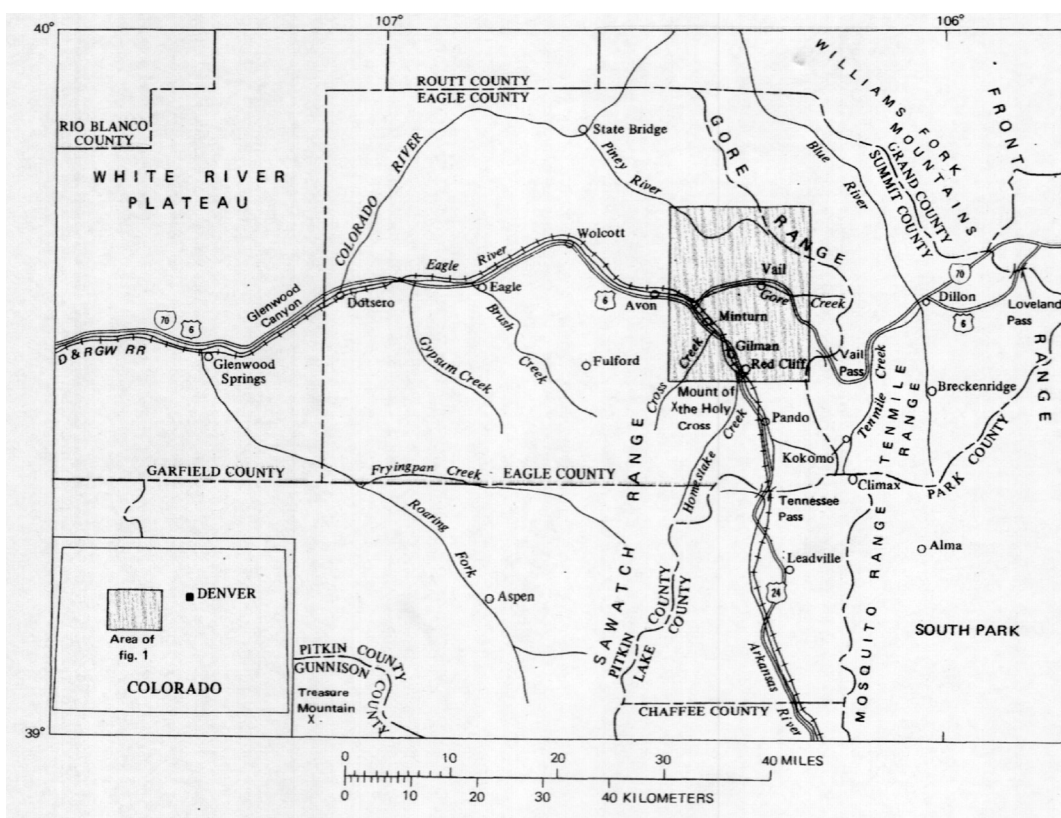
its own union doctor, and the option not to buy into the company plan. Empire Zinc agreed to allow a union clinic, but the negotiations ended in a deadlock on the issue of money, with the company standing its ground on a five-cent-an-hour raise. In August of 1954, Gilman workers went on strike, setting up a picket line in front of the shaft house, but they suffered internal conflict from the start.⁶⁰

A significant number of mill and surface workers did not want anything to do with the union, and within the first few days fights erupted between workers. Wives were often present on the picket line as well, and young boys working their first jobs were frequently harassed and referred to as scabs. Empire Zinc responded as it had in Hanover, pressuring Eagle County Sheriff Murray Wilson into issuing arrest warrants and his deputies took several strikers to jail in Eagle. The strike did not last long. The union agreed to the five-cent-an-hour raise, and the mine was running at full capacity again before the first snowfall. But Gilman's community would never be the same.⁶¹

Many strikers and strikebreakers who had been friends before the strike developed hard feelings toward each other and sometimes even refused to talk. Community ties between workers and merchants, who had always supplied a reliable system of credit, also became strained when merchants began garnishing the wages of workers who were as much as six weeks behind on their payments.

The foundation of corporate paternalism was weakened as well. Since the union contract did not mention the rescue team that had long trained on company time, New Jersey Zinc briefly entertained the idea of eliminating it, which almost caused another strike.

In 1959, Gilman workers struck again, this time under the wing of the United Steel Workers of America, Local 5102. Tensions remained throughout the remainder of Gilman's Empire Zinc period, but a basic labor agreement, authorized by the company and the union on Novem-



Index map of west-central Colorado. The Gilman district is small area between Gilman and Red Cliff, within Minturn 15-minute quadrangle (shaded). Thomas S. Lovering, Ogden Tweto, T.G. Lovering, Ore Deposits of The Gilman District, Eagle County, Colorado: Geological Survey Professional Paper 1017 (United States Government Printing Office, Washington: 1978)

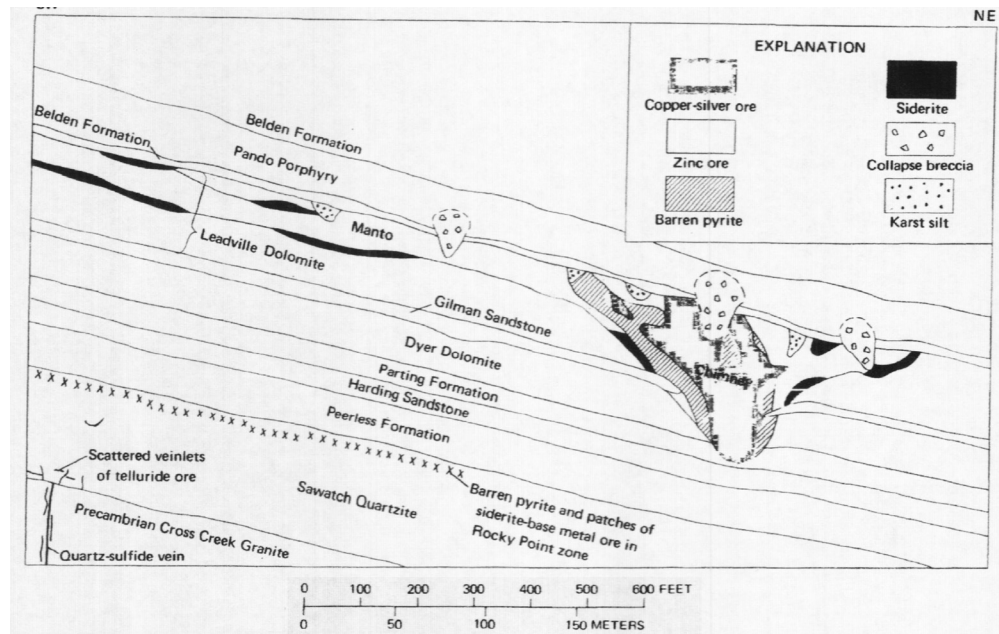
ber 25, 1960, stabilized Gilman's labor situation. It established much-needed guidelines on key issues, such as pay rates, arbitration, and management rights. Both parties endorsed a "No Work Stoppage, No Lock-out" article that ended such actions at Gilman. But the Eagle Mine, and the town that revolved around it, would soon face far more serious problems.⁶²

The End of an Era

By the summer of 1965, Gilman's fate was in limbo due to an internal conflict amongst New Jersey Zinc's board members. The company faced not only stagnant zinc prices, but the need for capital improvements and expansion as well. As a result, several members of the executive com-

mittee proposed a new corporate strategy that involved the total liquidation of New Jersey Zinc's assets, and a reinvestment in securities.

Gilman's Empire Zinc period would have likely ended at this point, if not for the efforts of Harold Zerbe, a director both of New Jersey Zinc and of a growing auto parts corporation, Gulf and Western Industries, Inc. In August 1965, Zerbe discussed New Jersey Zinc's dire situation with Gulf and Western's chairman, Charles G. Bluhdorn, and proposed a merger. Bluhdorn promptly began negotiations with New Jersey Zinc's chairman, R. L. McCann, who favored expansion over liquidation, and Gulf and Western officially acquired New Jersey Zinc during the fall of 1965. For McCann and Bluhdorn, the merger inaugurated a new era of growth and prosperity, but



Distribution of materials into manto and chimney ore bodies (patterned) and stratigraphic setting of ore bodies (diagrammatic). Thomas S. Lovering, Ogden Tweto, T.G. Lovering, Ore Deposits of The Gilman District, Eagle County, Colorado: Geological Survey Professional Paper 1017 (United States Government Printing Office, Washington: 1978)

in Gilman it only succeeded in buying the Eagle Mine a little more time.⁶³

By the mid-1970s, the Eagle Mine faced two terminal problems. Most auto manufacturers had abandoned the use of chrome in their vehicles, and the mine's reserves of zinc were nearly exhausted. A spike in gold and silver prices kept a much smaller operation going for few years, but ultimately the Eagle Mine closed at the end of 1977. In a 1975 interview in the *Vail Trail*, Mine Manager H. C. Osborne had expressed the grim reality of a nearly one hundred year old mine on its last legs:

Nothing goes on forever. . . . We are now looking at the end of our reserves. We have a limited life here unless we discover more ore. We are diamond drilling underground looking for additional deposits, and hopefully this will prolong the mine life. If metal prices should tumble, it may be just a few more months.⁶⁴

On December 16, 1977, the operation laid off 154 miners after a two-week notice, with 16 remaining on the payroll. Canon City businessman Glen Miller purchased Gilman and New Jersey Zinc's tailings ponds from Gulf and Western in 1983 for \$17.5 million, planning to put the land to multiple uses. These included converting mine tailings into fertilizer, creating new residential development, and possibility developing a ski resort. Within a year, however, Miller became financially mired and sold the town to the Battle Mountain Corporation. Gilman became a ghost town in the spring of 1985, when Battle Mountain evicted its remaining residents.⁶⁵

Gilman residents and workers had a variety of responses to the town's demise. Dick Cryan, Jr., returned to Gilman after the eviction and found broken windows, eroding walls, and an overall aura of desolation. He vowed never to return, preferring to preserve his fond memories of a "good, close community where there was no crime, and you could leave for a two-week vacation and never

lock the door.”

Not everyone has such endearing reminiscences. Some recalled a life of drudgery and abuse. In a 1980 interview, former Eagle Mine worker Nick Rivera stated, “I cannot believe that the company would lay me off with only two weeks’ notice at Christmas time, after I gave the company twenty-two years of service.” John Montoya, who had his hand mangled in a mine accident asked: “What am I supposed to do now that the company laid me off? When I got hurt in the mine, I settled my claim with the company because they promised me a light duty job, but now that they have laid me off, I will not be able to get a job anywhere.”⁶⁶

Clearly there were ugly realities that romantics like Dick Cryan, Jr., have filtered out of their memories. While these memories are selective,

however, they are not dishonest. On the contrary, they convey the reality of an unusually successful company town where many inhabitants were far happier than they were rich. Rivera and Montoya, conversely, remind us that Gilman was as much a grim commonality as it was an exception.” ■

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Notes:

1. Mrs. J. A. Thompson, *History of Gilman* (Gilman, CO: Empire Zinc Division, New Jersey Zinc Company, 1959 [in file folder “Gilman – A Mining Town” (Ruth Reichard, ed.), Eagle Public Library, Eagle, Colorado (hereafter EPL)]), 1.
2. Robert Gallegos, Tina Atencio, Celine Martinez, Debbie Lavato, and Jose Jaramillo, *From the County Seat to “Charlie” Vail: A Short History of the Growth and Development of Red Cliff, Gilman, Minturn, and Vail* (Glenwood Springs, CO: Raymond’s Print, 1980), 17; Walter W. Phippeny, “Gilman – Built Among the Cliffs,” *Eagle Valley Enterprise*, 23 Nov. 1923.
3. Art Kirkham, “Gilman Hikes Zinc Output,” *Denver Post*, 3 May 1951; MacDonald Knight and Leonard Hammock, *Early Days on the Eagle* (Eagle, CO: M. Knight and L. A. Hammock, 1965), 48.
4. Gallegos, et al., *From the County Seat*, 18; Charles, A. Reed, *Ginn Company’s Battle Mountain Potential Development Plan: Final Report of a Cultural Resource Inventory in Eagle County Colorado* (Eagle CO: Metcalf Archeological Consultants, 2006), 24; U.S. Environmental Protection Agency, *Superfund Record of Decision: Eagle Mine, CO* (Washington D.C., Springfield V.A.: Office of Emergency and Remedial Response, reproduced by the National Technical Information Service, 1993), 6; Tara Flanagan, “The Eagle River Runs Orange,” *Vail Trail*, 28 Dec. 1990.
5. James E. Fell, Jr., *Ores to Metals: The Rocky Mountain Smelting Industry* (Boulder: University Press of Colorado, 2009), 88; Olive H. Cryan, *The Gilman Years, 1923-1971* (unpub. manuscript, 1993, EPL), 35; Gallegos, et al., *From the County Seat*, 10; Knight and Hammock, *Early Days*, 7-8, 10, 17, 18-9. The Redcliff smelter went bankrupt sometime in 1881.
6. O. A. Gustafson, *A History of Mining at Gilman Colorado* (Gilman CO: Empire Zinc Division, New Jersey Zinc Company, 1959 [in “Gilman – A Mining Town,” EPL]), 4; Knight and Hammock, *Early Days*, 41, 48.
7. Gustafson, *History of Mining*, 4; Knight and Hammock, *Early Days*, 27; Cryan, *Gilman Years*, 6. One of these communities was a two-tiered settlement established between Redcliff and Gilman near the Black Iron and Ground Hog mines, known as Bell’s Camp-Poverty Flats. The upper community, Bell’s Camp, was built on a steep slope and originally consisted of tents and two cabins—one a store and the other a saloon. The lower settlement, Poverty Flats, was situated on level land. In 1884, the combined town was renamed Cleveland, and the settlement peaked in population at one hundred in 1890.

In 1882, a small community named Rock Creek was established in what is now the lower portion of the Gilman site near a stream of the same name. A second community in Gilman proper, known as Clinton—named after the Clinton Mines, the tunnels and inclines of which ran underneath the town

- site—emerged around the same time as Rock Creek. These two communities apparently coexisted until about 1900, sharing Rock Creek as a water source. Cryan suggests that the creation of the Wilksbarre shaft, which became a central part of New Jersey Zinc Company's operations, and a road into the center of Gilman were responsible for the consolidation of Rock Creek and Clinton into one community. Knight and Hammock suggest that the Wilksbarre shaft was sunk sometime in late 1900. At that point Clinton had been renamed Gilman for fourteen years.
8. Thomas S. Lovering, Ogden Tweto, and T. G. Lovering, *Ore Deposits of the Gilman District, Eagle County, Colorado: Geological Survey Professional Paper 1017* (Washington, D.C.: USGPO, 1978), 19-22; Gustafson, *History of Mining*, 2.
 9. Gustafson, *History of Mining*, 5; Knight and Hammock, *Early Days*, 27; "Red Cliff Mines," *Engineering and Mining Journal* 42 (July-Dec. 1886): 263.
 10. Thompson, *History of Gilman*, 1; Knight and Hammock, *Early Days*, 14, 27-9; Gustafson, *History of Mining*, 3, 5. Thompson describes a man named John Gilman who did many good things for the community, and served as president of the first school board. Gustafson claims this man donated the land for the first schoolhouse but refers to him as Judge Gilman. They likely are referring to Henry M. Gilman, superintendent of the Iron Mask Mine, after whom the town was named, although it is also possible they could be referring to Judge John Clinton, who Bruce Strasinger (*A History of Mining in Eagle County, Colorado*, unpub. manuscript, EPL, 7) believes was an early owner of the Iron Mask Mine.
 11. Gallegos, et al., *From the County Seat*, 16.
 12. Gallegos, et al., *From the County Seat*, 16; G. H. F. Meyer, letter to Mr. O. Q. Beckworth, 9 Dec. 1910, American Zinc Company Records, 1910-1914 (hereafter AZCR), Walter G. Swart File [Iron Mask Mine], (photocopies from the Western Historical Manuscript Collection, University of Missouri, Rolla), EPL. Meyer was either a consultant to or an employee of the Gilman Mining Company. He was asked to write a short history of the Little Chief Mine and in it describes the downfall of the mine, which was ultimately wrecked by "insanity and death." This letter also contains some valuable clues regarding neighboring mines during the mid to late 1880s.
 13. Thompson, *History of Gilman*, 1; Gustafson, *History of Mining*, 1. One article described a whiskey fueled knife fight between two men, one of whom apparently stabbed a bandit from a local gang in self-defense. The author suggested that the town needed to fight back against the rowdies claiming "there is a gang of toughs on the mountain who try to run the place and anyone who gains their enmity is sure to have trouble sooner or later. A few lessons such as Russel gave them will probably do a great deal of good." Another article described a fight between two carpenters over "a box worth a few pennies," which ended with one man smashing a revolver over the other man's head. The author contended that "a little administering of the state law in regard to carrying concealed weapons would have a salutatory effect upon the peace and comfort of that village."
 14. Cryan, *Gilman Years*, 37; Thompson, *History of Gilman*, 1-2. Thompson describes one case of arson in which a jealous competitor set fire to a Gilman hotel, but most of the fires were apparently caused by accidents involving candlelight.
 15. Fell, *Ores to Metals*, 201, 237-8; Meyer to Beckworth, 9 Dec. 1910; Gustafson, *History of Mining*, 5.
 16. Meyer to Beckworth, 9 Dec. 1910; Gustafson, *History of Mining*, 7-8; Fell, *Ores to Metals*, 237.
 17. Gustafson, *History of Mining*, 7; R. E. Radabaugh, J. S. Merchant, J. M. Brown, "Geology and Ore Deposits of the Gilman (Red Cliff, Battle Mountain) District, Eagle County, Colorado," in: *The Mines of the New Jersey Zinc Company* (Bethlehem, PA: New Jersey Zinc Co., 1980), 47.
 18. Information Sheet from E. A. Clark: Pittsburg Gold Zinc Company, Iron Mask Property, sheet no. Y, ore boy assays, 9 May 1907, Information Sheet from W. G. Swart: Owners of the Properties, Development, Ore Bodies, Assays p. 3, 1910, AZCR.
 19. W. G. Swart, "Notes on Separation of Eagle Bird Ore," 14 Feb. 1910, A. M. Plumb, Letter from A. M. Plumb, 3 June 1910, Meyer to Beckworth, 9 Dec. 1910, AZCR.
 20. Gustafson, *History of Mining*, 5 (only nine men worked between Redcliff and Gilman from 1911 through 1912); Gallegos, et al., *From the County Seat*, 15-16.
 21. Thomas Andrews, *Killing For Coal: America's Deadliest Labor War* (Cambridge, MA: Harvard University Press, 2008), 10, 17, 66, 158, 178, 244; Steward Holbrook, *The Rocky Mountain Revolution* (New York: Henry Holt and Company, 1956), 73-82; William Philpott, *The Lessons of Leadville, or Why the Western Federation of Miners Turned Left* (Denver: Colorado Historical Society, 1995), 2, 22-3, 84-5; Fell, *Ores to Metals*, 240-3. Coalfield-wide strikes took place in Colorado in 1884-85, 1894, 1903-04, and 1913-14. Significant rock mining strikes led by the Western Federation of Miners occurred in 1884 in Cripple over a demand for an eight-hour maximum workday; 1896-97 in Leadville over the hourly pay rate; and 1903-04, in a tumultuous episode known as the Colorado Labor Wars, which involved the entire mining and smelting industry. WFM-affiliated smelting workers staged strikes in Denver and Pueblo against American Smelting and Refining Company in 1899 and 1903-04 over the eight-hour day. This issue was particularly important to the WFM, which had adopted a socialist program in 1901. Mining

and smelting companies successfully undermined an amendment requiring an eight-hour maximum work day passed by Colorado voters by a 72 percent majority on November 4, 1902. The WFM adopted a socialist program in 1901 and the persistence of the Mine Owners' Association in fighting the constitutionally mandated eight-hour day accelerated the union's move toward radicalism and militancy.

22. Andrews, *Killing for Coal*, 17.
23. *The First Hundred Years of the New Jersey Zinc Company: A History of the Founding and Development of a Company and an Industry, 1848-1948* (New York: New Jersey Zinc Company, 1948), 29.
24. Walter G. Swart, letter to F. F. Young, 6 Feb. 1913, AZCR; Walter G. Swart, letter to Mr. H. S. Kimball, 3 Jan. 1914, AZCR; Gustafson, *History of Mining*, 8.
25. *Mines Register: Successor to the Mines Handbook and Copper Handbook*, v. XXI (New York: Atlas Publishing Co., 1942), 558; Lovering, et al., *Ore Deposits of the Gilman District*, 21-2; George E. Collins, "Mining in Colorado in 1919," *Engineering and Mining Journal* 109, no. 3 (Jan.-June 1920): 161.
26. Gustafson, *History of Mining*, 8; Radabaugh, et al., "Geology and Ore Deposits," 47; Lovering, et al., *Ore Deposits of the Gilman District*, 21-2.
27. *Mines Register*, XXI, 558; Carl Abbott, Stephen J. Leonard, and Thomas J. Noel, *Colorado: A History of the Centennial State*, 4th ed. (Boulder: University Press of Colorado, 2005), 266; Cryan, *Gilman Years*, 54, 72-3; Radabaugh, et al., "Geology and Ore Deposits," 47; William W. Burnett, *The Eagle on Battle Mountain at Gilman, Colorado and My Life as I Remember* (Eagle, Colorado: Eagle Valley Library District, 2002), 4, 15, 28; Art Kirkham, "Gilman Hikes Zinc Output," *Denver Post*, 3 May 1951. William Burnett claims that miners at Gilman made \$3.50 per day during the Great Depression, which would have been 25 cents below the prevailing wage according to Olive Cryan. Leo Wolman ("Wages during the Great Depression," National Bureau of Economic Research, Bulletin no. 36 (New York: National Bureau of Economic Research, Inc., 1933), 2) indicates the average weekly wage for metal mining was \$18.63, thus \$3.73 per day for a five-day week.
28. Lovering, et al., *Ore Deposits of the Gilman District*, 20-2.
29. Gallegos, et al., *From the County Seat*, 18; *On the Job at Gilman* (Gilman, CO: New Jersey Zinc Company, 1948), 23-7.
30. *First Hundred Years*, 29; Lovering, et al., *Ore Deposits of the Gilman District*, 20-2.
31. *On the Job at Gilman*, 4-22; Gustafson, *History of Mining*, 12; Bill Brenneman, "Mill Workers Go Down to Jobs in Gilman," *Rocky Mountain News*, 14 Feb. 1950; Radabaugh, et al., "Geology and Ore Deposits," 47. The company had decided not to build another mill in Belden for several reasons, including issues with pumping out tailings, the difficulty of securing the necessary railroad siding space and grades for handling crude ore at Belden, the expense of providing a large number of hopper-bottom ore cars; administrative and residential difficulties involved in the separation of the mine and mill, and, most importantly, Belden's severe climate and heavy snowfall.
32. Lovering, et al., *Ore Deposits of the Gilman District*, 20; Burnett, *Eagle on Battle Mountain*, 14-23. William Burnett worked at Gilman mainly as a shop worker from the early 1930s until 1958. His book provides the most comprehensive description available of the Eagle Mine and its operations.
33. Burnett, *Eagle on Battle Mountain*, 11-4.
34. Burnett, *Eagle on Battle Mountain*, 35; Vesta Coursen, *A Gilman Girlhood, 1919-1921* (unpub. manuscript, 1998, EPL), 6; Cryan, *Gilman Years*, 44.
35. Gustafson, *History of Mining*, 16; Burnett, *Eagle on Battle Mountain*, 43; *On the Job at Gilman*, 21; Cryan, *Gilman Years*, 48-50, 54, 63, 77; Coursen, *Gilman Girlhood*, 12.
36. Cryan, *Gilman Years*, 48-50, 54, 64; Gustafson, *History of Mining*, 16; Burnett, *Eagle on Battle Mountain*, 36; *On the Job at Gilman*, 21.
37. James D. Norris, *A History of the American Zinc Company* (Madison: State Historical Society of Wisconsin, 1968), 88-95.
38. Norris, *American Zinc Company*, 88-95, 129-30.
39. Norris, *American Zinc Company*, 88-9.
40. Burnett, *Eagle on Battle Mountain*, 4, 14-5, 28; Cryan, *Gilman Years*, 54.
41. Gustafson, *History of Mining*, 16; Burnett, *Eagle on Battle Mountain*, 6, 29.
42. Gustafson, *History of Mining*, 16; Burnett, *Eagle on Battle Mountain*, 6, 29; Brenneman, "Mill Workers." Many Gilman workers who wrote about their time in the Eagle Mine lived into their 80s and 90s, and several elderly former Eagle Mine workers still live in Redcliff.
43. Rusty Pierce, "The Mine at Gilman," *Vail Trail*, 1 Aug. 1975; Gustafson, *History of Mining*, 16; "Entombed Miners at Gilman Rescued," *Eagle Valley Enterprise*, 16 May 1924; Cryan, *Gilman Years*, 54.
44. Burnett, *Eagle on Battle Mountain*, 37; Cryan, *Gilman Years*, 59. Cryan's best friends were an inter-ethnic couple—Arthur and Jesusita Miles.
45. Burnett, *Eagle on Battle Mountain*, 25-6; Coursen, *Gilman Girlhood*, 33.
46. Cryan, *Gilman Years*, 48-50, 64; Robert Maloit, *My Life: Robert Maloit* [Shirley Welch, ed.] (unpub. manuscript, 2008, EPL), 44.
47. Jack A. Benson, "Skiing at Camp Hale: Mountain Troops during World War II," *Western Historical Quarterly* 15, no. 2 (Apr. 1984): 165; Cryan, *Gilman Years*, 67-8; Maloit, *My Life*, 14. Maloit indicates that skiing was popular in Gilman during the early

- 1920s.
48. Burnett, *Eagle on Battle Mountain*, 7, 34.
 49. Cryan, *Gilman Years*, 69-70; William H. Goetzmann and William N. Goetzmann, *The West of the Imagination*, 2nd ed. (Norman: University of Oklahoma Press, 2009), 230-2. Geographer Kevin Blake ("Imagining Heaven and Earth at Mount of the Holy Cross, Colorado," *Journal of Cultural Geography* 25, no. 1 (Feb. 2008): 4, 15, 16) writes that "content with the view of the cross from Notch Mountain, few pilgrims climbed Mount of the Holy Cross." According to Blake, the mountain served as both a sacred place for transcendentalists and an "example of transmutation, the process by which religious worship was transferred from cathedrals to the mountain landscape." William H. Jackson's black and white photograph, *Mountain of the Holy Cross, Colorado* (1873), became the most famous image of an American mountain ever produced. Thomas Moran's 1875 oil painting, *Mountain of the Holy Cross*, represented the peak of America's fascination with the Rocky Mountains as manifestations of the romantic sublime.
 50. Maloit, *My Life*, 15, 23.
 51. Coursen, *Gilman Girlhood*, 35, 43.
 52. Cryan, *Gilman Years*, 59, 67, 104; A. L. Hayes, "Talk Given at Dedication of 'Maloit Park' on July 4 1959," Maloit, *My Life*, 14, 58; A. L. Hayes, "Talk Given at Dedication of 'Maloit Park' on July 4 1959," Appendix 3 in Maloit, *My Life*.
 53. Cryan, *Gilman Years*, 45, 65.
 54. Gallegos, et al., *From the County Seat*, 17; Ellen R. Baker, *On Strike and on Film: Mexican American Families and Blacklisted Filmmakers in Cold War America* (Chapel Hill: University of North Carolina Press, 2007), 38-43.
 55. *On the Job at Gilman*, 4-20.
 56. Bob Gallegos, project director of the 1980 oral history project *From the County Seat to "Charlie" Vail: A Short History of the Growth and Development of Red Cliff, Gilman, Minturn, and Vail*, provides some valuable insight into the history of Mexican settlement in Gilman. See pages 17-8.
 57. Baker, *On Strike and on Film*, 45-85.
 58. Baker, *On Strike and on Film*, 13.
 59. Burnett, *Eagle on Battle Mountain*, 44-5.
 60. Burnett, *Eagle on Battle Mountain*, 44-5.
 61. Burnett, *Eagle on Battle Mountain*, 44-5; Cryan, *Gilman Years*, 98.
 62. "Agreement Between The New Jersey Zinc Co. Gilman, Colorado and United Steelworkers of America for Itself and on Behalf of Local Union 5102, July 26, 1963." United Steelworkers of America had apparently assumed jurisdiction over Gilman from Mine-Mill, as these two unions did not merge until 1967.
 63. *Hearings Before Antitrust Subcommittee (Subcommittee no. 5) of the Committee on the Judiciary House of Representatives Ninety-First Congress on Gulf and Western, Inc. July 30, 31, August 6, and 7, 1969* (Washington D.C.: USGPO, 1970), 13, 15-7, 26-7. In his congressional testimony, Bluhdorn mentions that board members of the New Jersey Zinc Company clashed over the choice of whether to expand the company's plant in Depue, Illinois, or to liquidate its assets. The company likely suffered significant losses due to the decline in zinc prices, but it was not in dire straits; in 1964 it reported a net gain of \$7.5 million.
 64. Gallegos, et al., *From the County Seat*, 18-9; Joel Millman, "Hard Luck Town on the Block," (Colorado Springs, CO) *Gazette Telegraph*, ? Sep. 1991; Cryan, *Gilman Years*, 84; Pierce, "Mine at Gilman."
 65. Gallegos, et al., *From the County Seat*, 18; Glen Miller, "Gilman: Past and Present," *Vail Daily*, 10 Aug. 1997; Rick Karlin, "Gilman Mine, Town Sells for \$17.5 Million," *Eagle Valley Enterprise—Chapter II*, 22 Sep. 1983; Lloyd Levy, "Man Buying Old Eagle Valley Mine Town," *Daily Sentinel*, ? Aug. 1983; Charles, A. Reed, *Ginn Company's Battle Mountain Potential Development Plan*, 24.
 66. Cryan, *Gilman Years*, 87, 100; Gallegos, et al., *From the County Seat*, 25.