Disasters on the Mining Frontier: A Look at Two Events on the Comstock

By Ronald M. James

Not surprisingly, two of the worst industrial accidents in Nevada, the Silver State, involved mining. The more dreadful and famous of these was the 1869 Yellow Jacket fire at Gold Hill in the Comstock Mining District. At least thirty-five miners died in the catastrophe, which sent aftershocks affecting the West's stock markets, a U.S. Senate race, and investments that made the remarkable Sutro Tunnel a reality.

The second of these disasters was an 1873 explosion that killed ten people in Virginia City, Gold Hill's larger neighbor. Unlike the Yellow Jacket mishap, no miners died in this second calamity. Instead, the victims were people who lived near an industrial activity. Then there was the question of the monkey, but let's not get ahead of ourselves.

These two events, occurring when the Comstock was at its height, offer vivid examples of the dangers associated with nineteenth-century mining, as well as how such dangers were and are viewed. A look at the casualties also provides an opportunity to examine a group of miners as well as the people living in an important mining community. Together, the two incidents illustrate diverse dimensions of the hazards that the mining industry presented.

The Comstock Mining District was established in 1859 after one of history's most remarkable gold and silver strikes. Its mines were noteworthy both for their wealth generated and the longevity of their production. For twenty years the Comstock set the industry standard for invention and success. A later turn-of-the-century period of prosperity reminded the mining world that the old giant was not finished, but it was the 1873 discovery known as the Big Bonanza that secured the Comstock's legendary international status.[1]

With a work force that at times exceeded five thousand, the Comstock mines had their share of fatalities.[2] Local mine owners were proud of safety innovations, including the safety cage, a law prohibiting talking to a working hoist operator, and the early replacement of nitroglycerine with TNT. Despite the district's dedication to safety, working underground with explosives and heavy equipment was inherently dangerous and accidents were inevitable. Surprisingly, incidents of groups of miners trapped and dying underground are relatively rare in the history of the Comstock, a testament to the district's safety standards.[3] The Yellow Jacket disaster is one of the Comstock's rare exceptions, providing the district with all the drama of a classic mining tragedy.

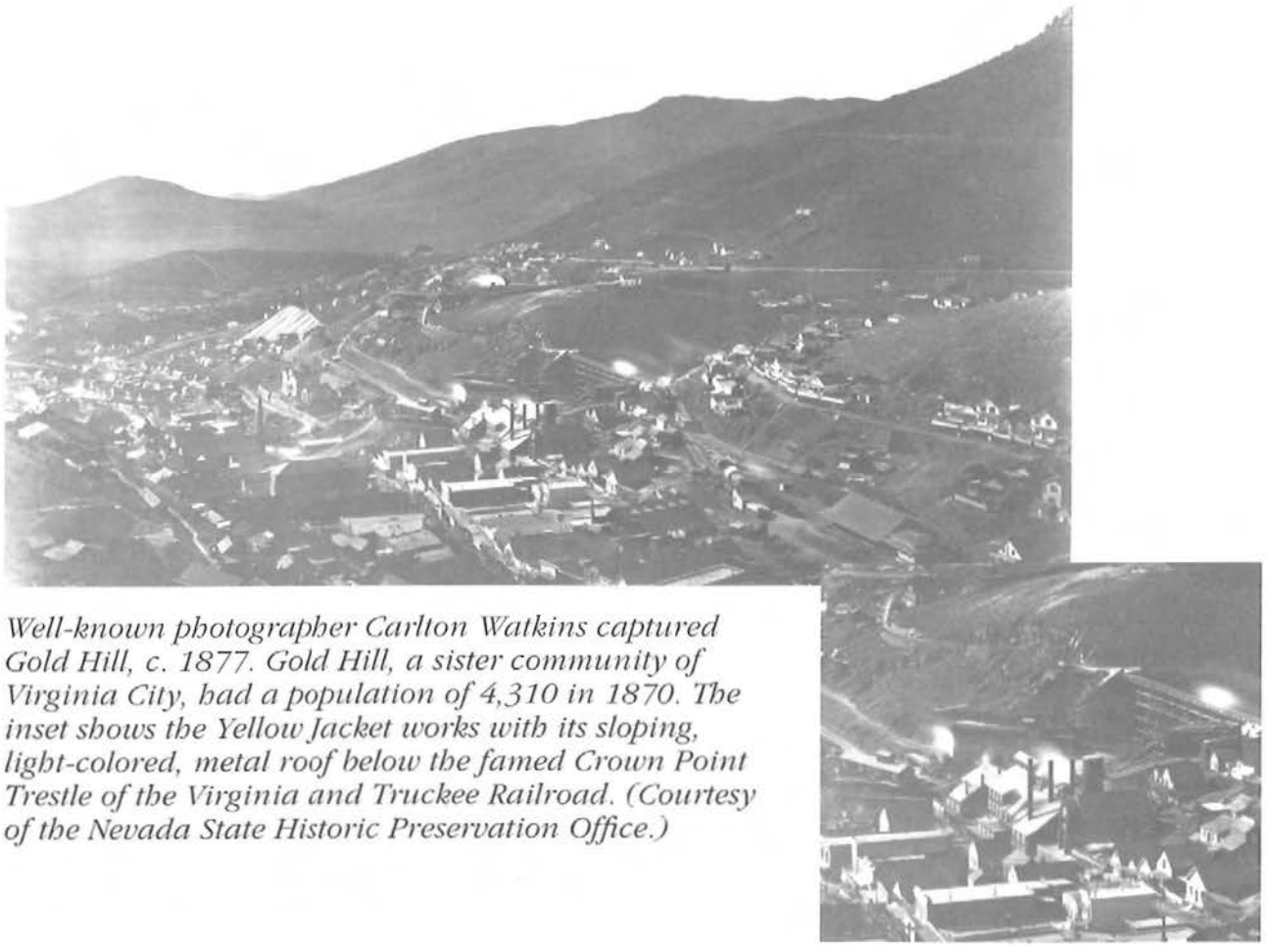
Miners have long feared fire as much as anything else. On the Comstock, underground workers died most frequently from falls and elevator mishaps in shafts, cave-ins, premature explosions, and scalding pockets of underground water, probably in that order. The last of these, in fact, gave veterans of the Comstock mines the prestigious, well-known nickname, "hot water plugs." Of all the threats, miners faced fire with particular dread, perhaps because it could produce agonizing suffocation rather than the instant death of an explosion or a cave-in. Rules prohibited smoking underground, and burning candles inspired constant vigilance. Diligence rewarded Comstock mines with few underground fires.[4] The most famous exception occurred on 7 April 1869 at the

800-foot level of the Yellow Jacket Mine in Gold Hill.

The degree of devastation at the Yellow Jacket eliminated any hope of determining what exactly caused the fire. Subsequent speculation theorized that an abandoned burning candle set the disaster in motion.[5] The specifics about the consequences of the fire are better understood, yet still imperfectly known. Whatever the cause, all agreed that the fire must have worked its way unnoticed along support timbers for quite a while. This occurred during the early morning hours when the graveyard shift was finishing its work. Since there were fewer miners during the late night shift, not as many lives were at risk as would have been the case during the middle of the day, but there was also no one around to notice or extinguish the fire as it progressed.

The flames devoured wood and oxygen, creating a large pocket of smoke-filled, foul air. The timbers held on until the shift change, when, at approximately 7:00 a.m., the weakened supports together with masses of rock collapsed into the drifts of the 800-foot level, flushing the poisonous fumes into the adjacent works like a lethal storm. Survivors said they heard what sounded like a gust of wind that instantly extinguished candles. They were the lucky few with first-hand accounts of the incident, having escaped to shafts or finding themselves far enough away to survive.

Eliot Lord, author of an 1883 history of the Comstock mines, recounted that "John



Well-known photographer Carlton Watkins captured Gold Hill, c. 1877. Gold Hill, a sister community of Virginia City, had a population of 4,310 in 1870. The inset shows the Yellow Jacket works with its sloping, light-colored, metal roof below the famed Crown Point Trestle of the Virginia and Truckee Railroad. (Courtesy of the Nevada State Historic Preservation Office.)

At its height in the early 1870s, the Comstock Lode employed over five thousand miners. (Courtesy of the Nevada Historical Society.)

Murphy, station-man at the 800-foot level of the Yellow Jacket shaft ... saw the fifteen lights of the station at once extinguished. The foul blast stifled him, and he crouched on the floor wrapping his rubber coat about his face. In a moment he lost consciousness, but could remember when rescued that he heard a pitiful cry come up the shaft from a lower level: 'Murphy, send me a cage; I am suffocating to death.'"[6]

Although this disaster was always linked to the Yellow Jacket, its point of origin, the worst devastation occurred in the neighboring Crown Point and Kentuck mines. Lord recounts the recollection of a survivor in the Kentuck. He and another miner were working on the 800-foot level when they heard a "gale roaring through the drift and were instantly overwhelmed by its fierce blast of smoke and gas. One struggled through the stifling atmosphere to the Crown Point shaft and was saved; the other fell dying in the drift beyond hope of rescue."[7]

In the Crown Point Mine, the morning shift was preparing to begin work. A cage containing forty-five men descended with groups to be let off at various levels. The cage dropped into the poisonous cloud and stopped at the 800-foot level, where the miners found victims calling for help in the dark, smoky adit. Survivors rushed the cage where they crowded as many as could fit onto the platform. At once, the miners signaled for an ascent. At the surface, they rushed off the cage so it could be sent back to the 800-foot level. When the cage returned to the surface again it bore only two brothers, immigrants from Cornwall.

The *Gold Hill Daily News* reported on the day of the fire that Richard and George Bickle, two of three brothers who worked in the Crown Point:

> groped their way to the cage and rang the bell to come up. When they arrived at the surface, George was discovered insensible, leaning over his brother and holding him as with a death grip, which it was quite difficult to disengage. Richard had his head torn almost completely off and his left arm was hanging by a little strip of skin to the shoulder. He had doubtless become insensible, and sinking down upon the cage, was dragged against the shaft timbers

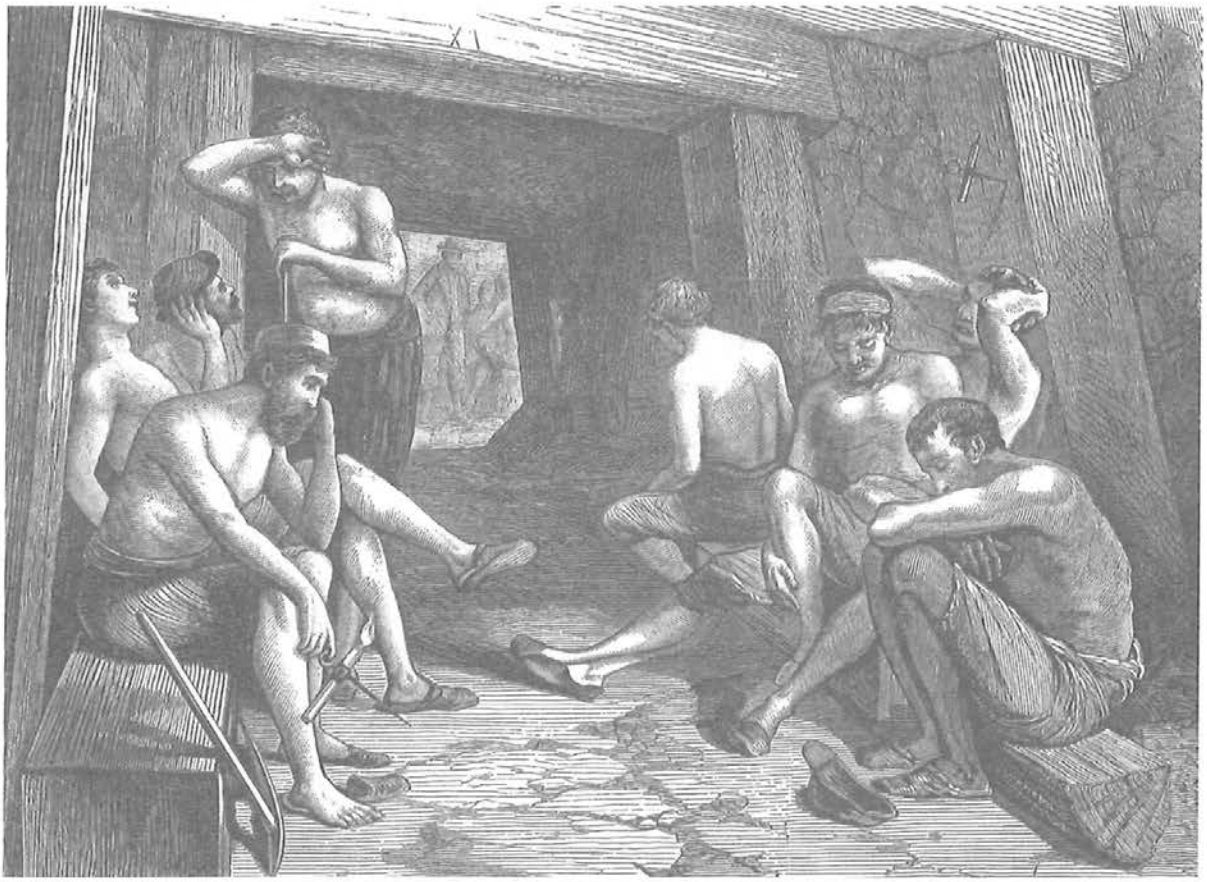
> at the sides. George still lives, but is insensible and suffering from asphyxia, produced by the inhalation of the terrible smoke.[8]

Although his doctor was optimistic, George Bickle succumbed shortly after the article was written.

Black smoke began billowing from the shafts of the Yellow Jacket and the neighboring Crown Point and Kentuck. Firemen, crowds of families and neighbors, and priests came to the site to watch helplessly. When the smoke dissipated a bit, rescue parties attempted to descend, but they were unsuccessful until 10:00 a.m., when they were able to remove two bodies from the 700-foot level of the Kentuck. Two hours later they retrieved four more victims from the 900-foot level of the Yellow Jacket.

The mine superintendents kept the blowers going to feed air to anyone surviving at the lower levels, even though the oxygen would also feed the fires. The smoke was worst in the Crown Point shaft, but by noon, the hoist operator was finally able to send a cage to the 1,000-foot level with a lighted lantern and a note that read, "We are fast subduing the fire. It is death to attempt to come up from where you are. We will get to you soon. The gas in the shaft is terrible, and produces sure and speedy death. Write a word to us, and send it up on the cage, and let us know where you are."[9] When the hoist operator brought the cage back to the surface, the lantern was extinguished and there was no response on the note.

The superintendents took roll to determine how many miners remained below. They had recovered six bodies, but the



Comstock mines were famed for the heat of their lower levels. Miners resting, as depicted in a 23 March 1878 lithograph from Frank Leslie's Illustrated Newspaper. (Courtesy of the Nevada Historical Society.)

number of missing included twenty-three from the Crown Point, one from the Yellow Jacket, and four from the Kentuck. In addition, there were victims who had made their way to the surface, including the two Bickle brothers, who were dead or dying.

At midnight four firemen decided to gain access to the 1,000-foot level of the Crown Point through the Yellow Jacket works, since smoke in its shaft had cleared more than the others. They made their way through noxious air and smoke until they finally arrived at a dreadful scene. Eliot Lord described what they saw:

> Dead men were lying on the floor of the level as they fell in the agony of suffocation, with their mouths glued to cracks in the planks or raised over winzes, turning everywhere for one last breath of fresh air. Their faces were flushed and swollen, but the features of well-known friends were not past recognition. Farther on, however, in the well at the bottom of the shaft, frightfully mangled bodies were found of wretched men who had met an instant death in their wild instinct to escape the torture. One poor sufferer had climbed up the shaft to a point between the 800 and 900-foot levels, where he was found hanging to the ladder with one leg fast inside, and still clasping the rounds with so firm a death-grip that he could only be plucked away by force.[10]

The firemen tied bodies to planks and hoisted them to the surface where friends

The Yellow Jacket fire created a scene of grief and turmoil at the surface. This lithograph is from Dan DeQuille's, The Big Bonanza, *published in 1876, seven years after the disaster. (Courtesy of the author.)*

The Yellow Jacket head frame as it stands today. (Photograph by the author.)

and family waited, mourning their losses. *Gold Hill Daily News* reporter Alf Doten recorded in his diary on 7 April that he "saw no less than six corpses brought out of the mines." The following day he noted "nine more bodies recovered today—some three of four I saw at the undertakers had heads crushed horribly—one had his head torn entirely off—twenty-nine corpses thus far—PM great funerals—Hard days work for me."[11]

Lord wrote that "some of the bodies taken out last were so mangled or decomposed by the heat that it was thought most merciful to hide their faces from their wives and children." On 9 April, Doten's descriptions continued:

> Fire and Smoke worse in mine today—smoke so bad that it drove all the engineers and others out of Crown Point works—works stopped—no more bodies recovered since yesterday—eight or ten more in the upper levels of the mine—At 11:00 a.m. they closed the mouths of the Yellow Jacket, Kentuck and Crown Point shafts and at 12 started bodies of steam down them from the boilers—They think this will be effectual—several more funerals today.

The following day, Doten noted "the three shafts still shut down and steam going down each—We issued about 1,000 *extras* at noon today giving full account of disaster from first to last."[12]

On 12 April, crews opened the shafts again and retrieved three more bodies. They quickly found, however, that the fire in the Kentuck was returning to life, and had to seal off the area once again. Frustrated that the fire could not be quelled and more bodies could not be retrieved, all that was left to Comstock residents was to hold a benefit at Piper's Opera House to assist the families of the victims. Six days later, on 19 April, Doten commented: "All three shafts open—men been down each—too much smoke and gas yet to allow of operations—William H. Williams fell down Yellow Jacket shaft early this morning and was killed—fell off cage from asphyxiation—500 feet to bottom—broke every bone in his body and tore off his head below the chin." Thus the fire claimed one more victim.[13]

On 20 May, Doten noted that "the body of Martin Clooney was found this PM in Crown Point shaft and brought out—only bones and clothes—identified by clothes and watch—The whole was bundled up together in a small box to bring it up—Flesh pretty

much all gone—it had been in water so long that there was little or no smell."[14]

Firefighters were unable to extinguish the smoke-spewing fire, which thrived beyond their reach. Eventually, everyone decided that the best strategy would be to seal the affected parts of the mine so the fire and smoke could not spread. They also hoped that without oxygen, the fire might suffocate.[15]

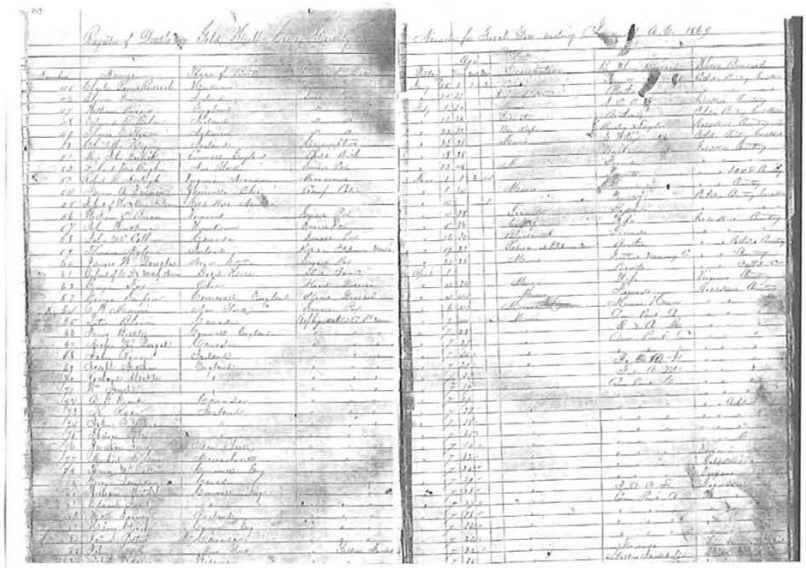
Lord concluded his discussion of the disaster by noting that "the damage caused by the great fire was never fully repaired; some of the closed galleries were never reopened, and the bodies of those miners, if not consumed in the furnace which was kindled below them, remain at this day in the crypts where the men were entombed by the fallen roofs of the galleries."[16]

The *Gold Hill Daily News* provided a stark, tragic summary of the men who had died. "Two of the men who were killed in the Crown Point mine yesterday were fathers of families containing five children. . . . Eleven of the men who were killed yesterday by the calamity in our mines, were married. . . . One of the men . . . had been married only ten days."[17] The loss of friends, husbands, and fathers in the mines was an on-going epidemic, taking a man here and there, week by week, but here was the brutal extravagance of a major disaster.

The exact number of victims remains something of a mystery. Newspaper accounts and burial records name thirty-five miners, but accounts include references to bodies not retrieved and miners whose names were not remembered. To understand the morning shift of miners who worked for the three companies in April 1869, it is possible to draw on the profiles of the thirty-five known victims, but it is likely that others were lost as much to the record as they were to life itself.

Fortunately, with the use of Storey County's archives, it is possible to piece together more than just the names of the dead and the summary of those they left behind available in the newspapers. Rescue teams retrieved thirty-one bodies, and the Gold Hill Cemetery Record Book reveals more about these men. That document lists the victims' places of birth, places of employment, and ages, and it includes information about where the bodies were buried and who buried them. In most cases, the mining companies assumed the task of burying the dead, but the International Order of Odd Fellows, the Free and Accepted Masons, and family members also appear in this capacity.

Records indicate that ten of the thirty-one bodies belonged to miners from Ireland.



The Gold Hill Cemetery Record Book preserves information about those who died during the Yellow Jacket fire. (Courtesy of the Storey County Recorder's Office.)

Daniel O'Neil was not recovered, and so he does not appear in the Cemetery Record Book. Although he could have been born in North America, it is more likely that he, too, was from Ireland, based on his name.

Burial records identify eight other miners as being from Cornwall. Although another three are listed with English nativity, two of these have Cornish names, so it is likely that a total of ten of the buried victims were from Cornwall. George Edmonds and Thomas Laity were not recovered and so precise information about them is lacking, but they too have typically Cornish names. So it appears the total number of Cornish victims was twelve.

Six of the buried miners were from Canada. Another four were born in the United States—two from New York, one from Massachusetts, and one from Wisconsin. An additional victim was possibly from Scotland. He had worked for the mine for only two days, and few details were known about him. Thus, roughly a third of the deceased represented Cornwall, Ireland, and North America each, with both England and Scotland giving one their sons to the disaster.[18]

Federal census records for 1870 indicate that of the 2,603 miners employed in Storey County, 1,135 lived in Gold Hill. Of these, the Irish-born number 392, and 251 appear with English nativity, although an analysis of names indicates that probably over half of those were Cornish. While approximately a third of the work force in Gold Hill was Irish, the English and Cornish together represented less than a quarter of the miners. The Cornish were, then, over-represented among the victims of the Yellow Jacket fire.[19]

The Yellow Jacket victims who were recovered had an average age of just over thirty. A year later, the federal census indicated that the average age of the miners was approximately thirty-three, hardly a significant difference. The ages of the victims ranged from a young Cornishman who was twenty-one to a French-Canadian who was forty. In all, it was a homogenous group of mostly immigrant men in the primes of their careers. The 1870 census provides little evidence about the widows. In a transient society with far fewer women then men, remarriage or relocation were always possibilities.

The Yellow Jacket disaster had repercussions that extended beyond the loss of income and emotional support for families. The western stock markets were shaken by the disaster, and many shifted their financial interests elsewhere. The mine fire was one part of a bad year for the Comstock. In 1869 the discovery of new ore bodies was wanting, and the excitement at Treasure Hill and Hamilton, to the east in Nevada's White Pine County, provided a new focus of attention. Some must have taken the Yellow Jacket disaster as a sign that the Comstock's mines were spent and that it was time to move on.

At the same time, there were optimists who lingered, unintimidated by the dreadful fire. The Comstock's miners' union was one of the most powerful in the nation, and it was not about to overlook an opportunity to increase safety or diminish the power of management. When local entrepreneur Adolph Sutro jumped on the band wagon, stating that he had a solution to prevent this sort of disaster, labor came to his support.

For years, Sutro had proposed a drainage tunnel over three and a half miles long that would intersect the Comstock at about the 1,600-foot level. Mine owners resisted the project because, should it have been built in the 1860s, Sutro would have monopolized the transportation of men and ore in and out of the district's mines. In addition, his town of Sutro, at the tunnel's mouth, would have become the logical place for the mine workforce to reside and for mills to process the district's ores. Since he controlled all of the real estate in his town, Sutro's plan would have ended the importance of Virginia City and Gold Hill, and it would have shattered the monopoly of the powerful Bank of California in the district.[20]

Sutro, a German immigrant whose attention was drawn to the Comstock by the early

Adolph Sutro was able to initiate work on his drainage tunnel as a result of labor unrest associated with the Yellow Jacket fire. (Courtesy of the Nevada Historical Society.)

1860s, maintained that his project could have provided miners with a means of escape. It was an absurd claim, but the miners' union saw it as an opportunity to challenge management and to give workers another source of employment during a depression. Within months, excavation began on Sutro's project. When it was finally completed in 1878, it connected to mines that probed far deeper than sixteen-hundred feet, so it did not offer passive drainage for the active excavations as planned. Further, the Virginia and Truckee Railroad provided a cheap means to transport ore to mills along the Carson River. So Sutro's Tunnel, finally initiated in the wake of the Yellow Jacket disaster, failed to live up to expectations.[21]

A final ramification of the Yellow Jacket disaster occurred in 1872. William Sharon, Comstock representative of the Bank of California, and John P. Jones, superintendent of the Crown Point Mine, both sought election to the U.S. Senate. Incredibly, Sharon accused Jones of setting the fire in the Yellow Jacket to engage in stock manipulation.[22] Fortunately, most voters rejected that sort of offensive campaigning and Jones was elected. Two years later, Sharon finally won his senatorial seat, only to become widely regarded as one the worse representatives that Nevada ever sent to that august body.

The Yellow Jacket disaster caused more deaths than any other industrial accident in Comstock history, and it continues to be a well-known fixture of the past for the mining district. The second worst accident achieved far less fame and had a negligible effect on the Comstock, even though it struck at the heart of the community itself.

At 11:00 p.m., 29 June 1873, an immense explosion shook downtown Virginia City. The *Territorial Enterprise* reported that the sound "was as loud as would have been

The Sutro Tunnel still provides passive drainage for the Comstock Lode at the 1640-foot level. This photograph depicts the inside of the tunnel c. 1935. (Courtesy of the Comstock Historic District Commission.)

William Sharon represented the Bank of California on the Comstock. (Courtesy of the Nevada Historical Society.)

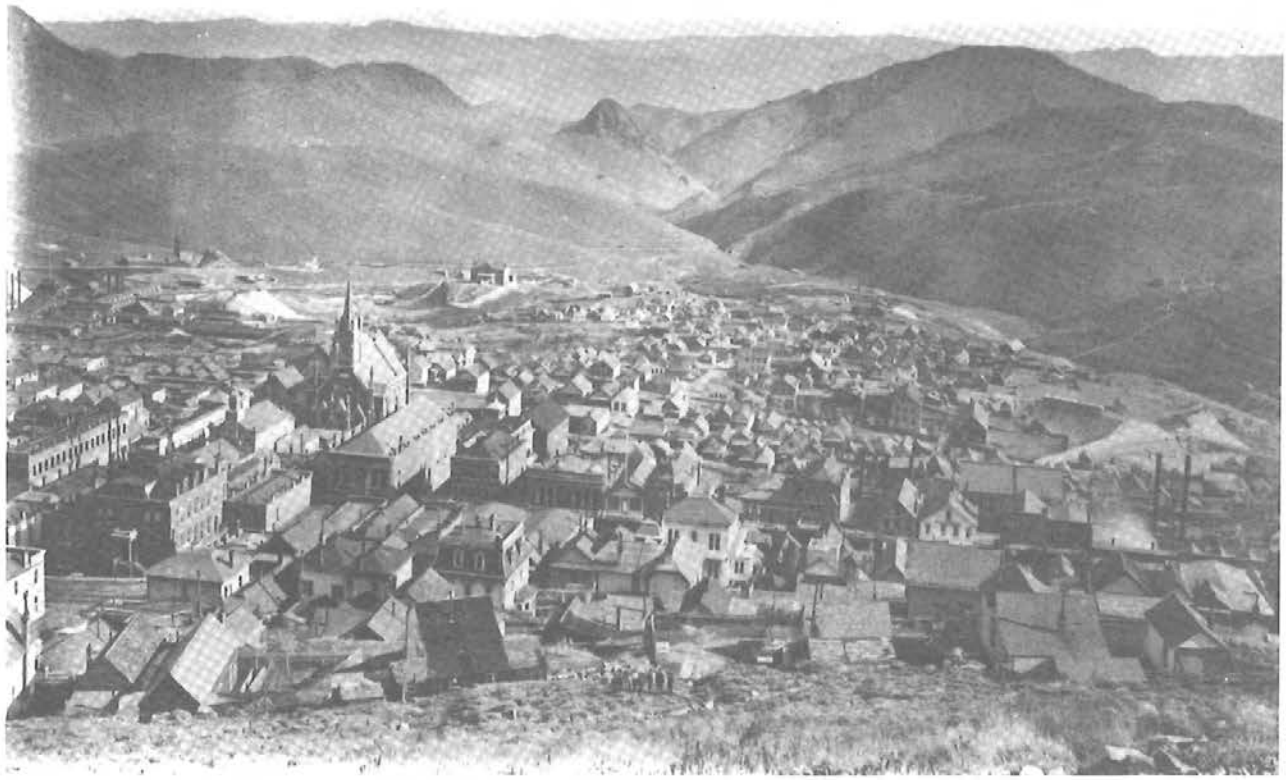
made by the largest piece of ordinance, but [that it was] exceedingly sharp and ringing." The *Enterprise* continued that "a bright flash, as of lightning, gleamed over the central part of the city. A cloud of dust and smoke rising up at the corner of B and Taylor streets showed where the disaster had occurred."[23]

The community was accustomed to noise. Dozens of enormous steam engines drove stamps and pumps twenty-four hours a day, and underground detonations were common at any time. Three shifts of miners and mill workers were constantly coming and going like the tide. The town was always alive with boisterous voices as saloons, restaurants, and street hawkers addressed the needs of men leaving work.

In spite of all of this cacophony, the explosion on that hot summer evening was different. The bells of the nearest fire companies quickly responded, but when they arrived at the corner of B and Taylor streets, just above the Bank of California, firefighters found a pile of brick and wood where Mrs. Lizzie A. Taylor's lodging house had once stood. The *Enterprise* reported that "flames gradually arose in spite of the water poured in upon them by the engines, [but] before the fire was wholly subdued the block had been well nigh totally destroyed." It quickly became apparent that at least nine people had died within the apartment building. Across the street, James Devine, working inside a stable, "was struck by an iron shutter which came through a window into the harness-room."[24] His injuries were so severe that he also did not survive.

Other casualties that night included Jacob Van Bokkelin, provost general of the National Guard and one of the community's most respected citizens. He had arrived on the Comstock during its earliest development, appearing in the 1862 directory of the Nevada Territory, where he is listed as a member of the first legislative assembly. Van Bokkelin made a name for himself as an entrepreneur of various sorts. His beer garden below Virginia City was a pleasant place for a retreat on a hot summer day, but van Bokkelin also imported dynamite. He had such confidence in the product that he stored his inventory in his rooms and was even known to sleep on the boxes when his stock demanded every part of his apartment.[25]

The victims of the disaster included several other notable members of the community. In addition to Van Bokkelin and James Devine, death took J. P. Smith, a hardware merchant; H. Davis, Smith's salesman, who shared a room with his employer; William "Billy" L. Low, superintendent of the Silver Hill Mine; Charles H. Knox, of the firm Palmer, Knox, and Company, San Francisco; E. Mandel, a nineteen-year-old French immigrant who worked as a clerk with D. Block and Company; Susan M. Dean, wife of Edward Dean of Gold Hill; Elizabeth, her eight-year-old daughter; and Mrs. L. P. O'Connor. The *Enterprise* observed that had the explosion occurred an hour later, fatalities would have been much worse,



Carlton Watkins photographed Virginia City c. 1877, four years after the explosion in Van Bokkelin's apartment. The site of the explosion is the back of the brick building that appears near the foreground at the far left. (Courtesy of the Nevada State Historic Preservation Office.)

because many persons who resided in the apartments were still about the town at the time of the blast.[26]

There were numerous non-fatal injuries, as the explosion hurled shrapnel about the neighborhood, but James Devine proved to be the only fatality outside of the building. A night watchman, who just before the explosion had entered the livery stable where Devine was working, was blown over and badly cut on the nose and face. The owner of the Conger House across the street to the north was similarly injured. The explosion knocked several other people to the ground, and others received wounds from flying glass and splinters. The Chinese immigrants operating a wash house across the street narrowly escaped harm.[27]

Moments after the explosion, another drama unfolded. Elizabeth Taylor, who owned the demolished boarding house, and four of her residents, including Joseph Sharon, brother of William Sharon, were forced to crawl out of their windows onto the roof of an adjacent damaged building to escape the growing fire. They had been cut by flying glass. Taylor screamed for help, but no one was available until one of the fire companies arrived with ladders and finally rescued them. They said that they thought there had been an earthquake.

Their neighbors, Frank Osbiston and his family, also escaped with their lives, but they lost all of their property. Cornish-born Osbiston was a mining superintendent of local note. The Osbiston shaft, opened in the late 1870s, would become one of the community's deepest, reaching 3,200 feet. Like many of the others killed or affected by the 1873 disaster, Osbiston was in the middle or upper class. But he was unusual for being of foreign birth; most of those involved

were born in the United States.[28]

The destruction of property was extensive. Several buildings along B Street were destroyed or severely damaged. Many businesses lost a great deal of inventory, and the Emmet Guard, an Irish military unit, lost all of its arms and an estimated one thousand rounds of ammunition. The *Enterprise* listed the total cost as in the hundreds of thousands of dollars.[29]

Water damage to the Bank of California, operating from the lower C Street side of the building at the center of the explosion, was severe. The *Enterprise* reported that "the ceiling overhead . . . was so far demolished . . . that it has been found necessary to take it all down and newly plaster it." To relieve concerns about the fate of the bank's assets, the institution opened the day after the fire, but the newspaper noted that "J. P. Martin, cashier of the institution, was to be seen wading about with an umbrella over his head, taking in and paying out coin as usual."[30]

Fire amidst the ruins left from the explosion flared up again five days later. The firemen discovered that the soil was saturated with combustible wax, the melted remains of three thousand boxes of candles that were stored in the basement of the building. Miners had to dig around the base of the building to remove smoldering debris. As workers demolished the remaining walls, they discovered that the fire still smoldered as late as 9 July, ten days after the explosion. Nevertheless, work progressed, and construction workers eventually rebuilt the block.[31] The structure, completed in 1873, which combined the original 1860s Bank of California with the reconstruction to the rear, still stands today.

Like the Yellow Jacket disaster, the exact cause of the detonation in 1873 is unknown. People speculated about a certain suspect. Van Bokkelin had a pet monkey, and local newspaper reporters suggested that perhaps the mischievous imp had set the incident in motion, but no one could be certain. The inquest focused on some experiments being conducted by Van Bokkelin. He was apparently working with a combination of gun cotton and nitroglycerin, which he felt would be a much more powerful substitute for TNT.[32] The inquest held by the coroner could not, however, determine how this material could have been set off. All investigators could determine with certainty was that ten people had died and that several buildings were destroyed or damaged.

Jacob Van Bokkelin was the provost general of Nevada's National Guard and a respected member of the community. (Courtesy of the Nevada Historical Society.)

In searching the remains of the apartment building in the center of Virginia City, workers found no sign of the monkey, whose story has become a favorite during modern tours of Virginia City. The fact that he disappeared inspires wild speculation about the furry anarchist fleeing to Bolivia or being responsible for other western disasters. It is easy to find humor in the incident over a hundred and thirty years after the fact, but it is a misleading reaction when trying to

imagine life in a nineteenth-century community. The *Territorial Enterprise* concluded that "the horror which has resulted in a loss of life so lamentable should be accepted as a warning against the storage of dangerous amounts of powder or nitroglycerine in the habitable parts of the city."[33]

The Yellow Jacket disaster underscores the dangerous nature of mining for those underground. The 1873 explosion at B and Taylor streets adds another dimension to the topic. It could also be fatal to live near mining. Dan De Quille noted in 1876 that some miners had blown off their noses as a consequence of accidentally mixing blasting caps and tobacco and then placing both in their pipes. He also observed that many children had lost fingers from playing with the dangerous tools of mining. But other people died as a result of living next to heavy machinery and explosives.[34]

The two disasters described here are dramatic extremes of a tragically commonplace circumstance. Miners, millers, and neighbors suffered injuries or died on a daily basis, but incidents with only one or two victims did not always capture space in local newspapers. Headstones in local cemeteries document miners who died, but reporters were not always inspired to write about accidents when only a single fatality resulted.

Reactions to these two incidents also provide a source of insight into the period, and into those that followed. The owners and laborers of the Comstock mines took pride in innovative, state-of-the-art safety measures, but accidents were inevitable.[35] The Yellow Jacket disaster was a source of embarrassment because precautions failed in a remarkable way. Accusations and blame, swirling through the community, heightened antagonism between labor and management. Labor embraced the Sutro Tunnel, which promised both a safe means of evacuation and a way to bust the monopoly of the Bank of California.

William Sharon and his bank eventually lost control of the Comstock, but not because of the union or Sutro. New ore bodies in the bank's mines remained elusive, and rival, previously sterile claims became the source of a new excitement. John Mackay and James Fair, the local faces for the Big Four, were in the midst of discovering the legendary "Big Bonanza" when the 1873 explosion occurred. With that success story, the Bank of California's control of the Comstock ended. It would be five more years before Sutro finished his tunnel, and when complete it had little effect on safety or mine ownership. Sutro sold his stock while it peaked, then retired to San Francisco to establish his prominent library and baths. Sutro's 1894 election as mayor of the bay city, realized a final indirect effect of the Yellow Jacket disaster.[36]

The Bank of California building is still an imposing presence on Virginia City's main street. To its rear was the scene of a massive explosion in 1873 in the apartment of General Jacob Van Bokkelin.
(Photograph by the author.)

Recollections of the Yellow Jacket disaster affected a senatorial campaign and still resonate today. Local residents point to the Yellow Jacket hoist with tragedy-inspired reverence. The explosion during that June night in 1873 failed to find a similar place in local lore. This accident did not fit in with any popular theme, and it was eventually forgotten by all but historians sifting through primary sources. When I give tours of Virginia City, I find the story of the Yellow Jacket fire inspires horror, as visitors contemplate the desperate struggles and deaths below ground. The 1873 explosion did not cause as many casualties, but was nevertheless terrible. In spite of this, reminiscence focuses on the humorous story of the monkey. Granted, it is a natural punch line, but even if a monkey caused the Yellow Jacket disaster, it would be impossible to find humor in the fatal depths of the mine. Suffocation underground eludes even the most morbid sense of humor.

While the memory of danger is vivid in the one case, it suffers from amnesia and has eventually become humor-filled in the other. Hindsight found no glamour or relevant story in the deaths suffered during innocent sleep in the middle of the night. Death and heroism below ground find immediate and perpetual meaning. The fewer number of deaths in the former event is not the reason why it failed to find a place in local lore. The Yellow Jacket disaster will continue to resonate while Van Bokkelin's explosion will remain a footnote. Taken together, the two incidents serve as reminders of how dangerous mining could be for everyone, laborer and neighbor alike. They also provide insight into the people who lived and worked in a prominent mining community one hundred and thirty years ago.

Ronald M. James is the Nevada State Historic Preservation Officer, administering the office since 1983. He is the author of five books including The Roar and the Silence: A History of Virginia City and the Comstock Lode (1998).

Notes:

[1] For overview histories see: Eliot Lord, *Comstock Mining and Miners* (1883; reprint, San Diego: Howell-North, 1959); Grant H. Smith, *The History of the Comstock Lode: 1850-1997* (Reno: Nevada Bureau of Mines and Geology in association with the University of Nevada Press, 1998, 2nd ed. with new material by Joseph V. Tingley); and Ronald M. James, *The Roar and The Silence: A History of Virginia City and the Comstock Lode* (Reno: University of Nevada Press, 1998).

[2] An 1875 state census indicates that there were over five thousand miners employed in Storey County, home to Virginia City and Gold Hill. Many other workers, including millers, carpenters, and engineers, also served the industry, and some of these worked underground as well. The federal censuses of 1870 and 1880 missed the mid-1870s apex of population and prosperity.

[3] See James, *The Roar and the Silence*, 212-3, 248.

[4] Lord (*Comstock Mining and Miners*, 269, 292, and 321) identifies a few instances of underground fires, but for a twenty-year overview, his history has only a few examples, even though it appears to be exhaustive.

[5] Lord, *Comstock Mining and Miners*, 269. William Wright (a.k.a. Dan DeQuille), *The Big Bonanza* (1876; reprint, New York: Alfred A. Knopf, 1953), 126-31.

[6] Lord, *Comstock Mining and Miners*, 270.

[7] Lord, *Comstock Mining and Miners*, 270.

[8] *Gold Hill* [NV] *Daily News*, 7 Apr. 1869. Lord, *Comstock Mining and Miners*, 271. The *News* and Lord credit the Bickle brothers as being from Yorkshire. Local death records indicate that they were from Cornwall, and this seems to be more likely, the Yorkshire nativity being reported in the confusion of the day of the accident. Storey County Records, Gold Hill Cemetery Record Book, Storey County Recorder's Office.

[9] *Gold Hill Daily News*, 7 Apr. 1869.

[10] Lord, *Comstock Mining and Miners*, 273. See also *Gold Hill Daily News*, 10 Apr. 1869.

[11] Alfred Doten, *The Journals of Alfred Doten: 1849-1903* (Reno: University of Nevada Press, 1973), 7 Apr. 1869, 1041. All quotations from Doten's diary appear as originally written.

[12] Lord, *Comstock Mining and Miners*, 273. Doten, *Journals*, 9 and 10 Apr. 1869, 1041-2. Emphasis his.

[13] Doten, *Journals*, 1041-3.

[14] Doten, *Journals*, 20 May 1869, 1046.

[15] Lord, *Comstock Mining and Miners*, 274-5.

[16] Lord, *Comstock Mining and Miners*, 276-7.

[17] *Gold Hill Daily News*, 10 Apr. 1869. This issue was a special edition that summarized previous articles, hence the reference to "yesterday."

[18] Gold Hill Cemetery Record Book.

[19] An online fully searchable database of the federal census records for Nevada is available at www.nevadaculture.org. See Ronald M. James, "Defining the Group: Nineteenth-Century Cornish on the Mining Frontier," in Philip Payton (ed.), *Cornish Studies 2* (Exeter, UK: University of Exeter, 1994), for an analysis of Cornish and Irish immigrants.

[20] Robert E. and M. F. Stewart, *Adolph Sutro: A Biography* (Berkeley, CA: Howell-North, 1962), passim. James, *The Roar and the Silence*, 58-9, 88-90.

[21] Stewarts, *Adolph Sutro*, passim.

[22] Russell R. Elliott, *History of Nevada* (Lincoln: University of Nebraska Press, 1987; 2nd ed. completed with the assistance of William D. Rowley), 162.

[23] (Virginia City, NV) *Territorial Enterprise*, 1 July 1873.

[24] *Territorial Enterprise*, 1 July 1873. These quotations appear as originally published.

[25] *Territorial Enterprise*, 2 July 1873.

[26] *Territorial Enterprise*, 1 July 1873.

[27] *Territorial Enterprise*, 5 July 1873.

[28] Federal Census, 1870, www.Nevadaculture.org. See James, "Defining Ethnicity," for a discussion of Osbiston.

[29] *Territorial Enterprise*, 1 July 1873.

[30] *Territorial Enterprise*, 5 July 1873.

[31] *Territorial Enterprise*, 6, 9, 15 July 1873.

[32] *Territorial Enterprise*, 4 July 1873.

[33] *Territorial Enterprise*, 1 July 1873.

[34] Wright, *The Big Bonanza*, 147-8. James, *The Roar and the Silence*, 130.

[35] James, *The Roar and the Silence*, 120-1.

[36] Stewarts, *Adolph Sutro*, 202-4.