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November 7, 1986

Eugene Faust
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Dear Mr. Faust:

Per your request, we have made you a copy of the Eureka Historical Building and Archaeological Project Report. The total cost is $10.85, the cost of copying 155 pages at .07 a page. Please make the check payable to the Division.

If you have any questions or need further information please call me.

Sincerely,

Alice M. Becker

Alice M. Becker
Staff Archeologist

AMB:emt
Enclosure

Check sent to Alice
on 11/13/86

EUREKA HISTORICAL BUILDING AND ARCHAEOLOGICAL PROJECT

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Division of Historic Preservation
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ABSTRACT

Eureka was central Nevada's most prominent mining district during the 1870s and 1880s, and the first major lead producer in the United States. At its height, the town had a population of about 6000 and contained numerous hotels, restaurants, and saloons, four churches, several newspapers, two banks, a rail head, and an opera house. Many historical buildings from that time period still remain in the town which has been designated a National Register District.

During the summer of 1985, a inventory of the buildings and a brief historical archaeological survey were conducted under the auspices of the Nevada Historical Society for the Division of Historic Preservation and Archaeology, Carson City. A total of 145 historical buildings was identified and recorded in the town. Historical research indicates that many of the buildings were erected over a century ago. This report presents the results these investigations.

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ACKNOWLEDGEMENTS

The 1985 Eureka Historical Building and Archaeological Project was financed by matching grants. Seventy percent of the funds were provided by the Department of the Interior, National Park Service through the Nevada Division of Historic Preservation and Archaeology, and thirty percent was provided by the Nevada Historical Society. We gratefully acknowledge the support from these state and federal agencies.

At the Nevada Division of Historic Preservation and Archeology, Alice Becker, Ron James, Kate Kuranda, and Lona Williams were quite helpful in explaining the intricacies of federal granting procedures. I would especially like to thank Ms. Kuranda for her architectural expertise and assistance on the Eureka building inventory.

The Nevada Historical Society extended innumerable courtesies throughout the course of the project. Most importantly, they supplied the operating capital prior to National Park Service reimbursement and administered the contract. I was treated like a staff member and was provided office space, use of equipment, and complete access to their research materials. I wish to thank Director Peter L. Bandurraga and the Nevada Historical Society staff--Eslie Cann, Phillip Earl, Neeroo Kumar, Eric Moody, Lee Mortenson, Ann Spence, and Cheryl Young--for all their help and assistance during the project.

The contributions of the authors and other personnel involved in the Eureka project are as follows. Steven R. James was responsible for directing the project and writing the over-all

report. Dr. Donald L. Hardesty, Department of Anthropology at the University of Nevada, Reno, conducted several days of field work and wrote the section on the archaeological resources of the Eureka Mining District. Dr. Eugene M. Hattori, Bechtel Corp., San Francisco, submitted the proposal and was awarded the grant for the project. He also wrote the majority of the historical overview and served as project advisor. The appendix on place names was written by Alvin R. McLane, who assisted with several days of field work. Ms. Judy Ann Knokey, graduate student at the Department of American Civilization, University of Pennsylvania, was very helpful as a research assistant, particularly in "exploring" the dusty records in the Eureka County Courthouse attic. Amy Mazza drafted the maps. Lucy Scheid, graduate student at the Department of Anthropology, University of Nevada, Reno, served as research assistant to Hardesty.

During the field work, a number of Eureka residents provided information on various historical aspects of the town. At the Eureka County Museum, Genny Bailey, Susan Gallagher, and Maxine Rebaleati gave freely of their time, allowed access to historical photos, and even provided a brief tour of the town. The Eureka County Courthouse officials and staff are thanked for allowing access to the county records and maps: Jim Ithurralde, Joan Shangle, Michael Rebaleati, Marsha Elliot, and Gladys Goicoechea. Other residents who filled in some of the details about the town's history include Albert Biale, Jim Dotson, Estelle Gensoli, Marge Hammond, Duke Klindt, Thomas B. Nolan, Marjory Pastorino, Anne

Pate, Bob Stephenson, Jerry White, Jon Young, and former resident Mabel Anderson. I am especially grateful to Albert Biale, a native Eurekan and lifelong resident, for the hours he spent with me answering my numerous questions on former merchants in the town.

Steven R. James
August, 1985

DISCLAIMER

The 1985 Eureka Historical Building and Archaeological Project was financed in part with Federal funds from the National Park Service, Department of the Interior. For this reason, the following disclaimer is specified by them. The contents and opinions expressed in this report do not necessarily reflect the views or policies of the Department of the Interior nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Department of the Interior.

INTRODUCTION

The Eureka Mining District in central Nevada was the first major lead producer in the United States until exceeded by Leadville, Colorado (Ingalls 1907:1052; Couch and Carpenter 1943:59; Lincoln 1923:88). Between 1869 and 1883, the mines produced about $60,000,000 in gold and silver, and about 225,000 tons of lead (Curtis 1884:xiii). The district is also considered to be the birthplace of American silver-lead smelting technology (Ingalls 1907:1052). As of 1879, there were 16 furnaces in the town with a total smelting capacity 925 tons (Molinelli 1879:25-26). With these numerous smelters belching smoke into the air, it is no wonder that Eureka was called the "Pittsburg of the West."

In the 1870s and 1880s, Eureka was a cosmopolitan city boasting numerous hotels, restaurants, churches, several newspapers, a rail head, and an opera house. Italians, Cornish, Jewish, and Chinese comprised major ethnic groups which maintained many traditional customs lending an international air to the community. A tourist guide described Eureka in 1884 as, "a town with a population of 6,000, great enterprise, public spirit and prosperity" (Shearer 1884:199).

Eureka is probably the best preserved mining town in Nevada outside of Virginia City. Unlike Virginia City, however, Eureka has not succumbed to commercialism and retains many fine historical buildings erected over a century ago during the town's heyday.

LOCATION AND SETTING

Located on U. S. Highway 50 about 250 miles east of Reno and 320 miles southwest of Salt Lake City, the town today serves as the county seat of Eureka County and has a population of about 700. It is situated at about 6500 feet (1981 meters) elevation in Eureka Canyon at the base of the Diamond Range which attains a maximum height of 10,614 feet (3225 meters) on Diamond Peak only 10 miles (16 kilometers) away. Diamond Valley lies to the north, and the Fish Creek Range is to the south and west.

Vegetation in the area is characteristic of the sagebrush (Artemisia tridentata) and pinyon-juniper (Pinus monophylla; Juniperus osteosperma) communities (cf. Billings 1951; Cronquist et al. 1972). Mountain mahogany (Cercocarpus ledifolius) and limber pine (Pinus flexilis) occur at higher elevations. Bristlecone pines (Pinus longaeva) which are the oldest living trees in the world and limited to a few high ranges in the Great Basin have even been reported from Prospect Mountain above Eureka. Many bristlecones were unfortunately cut down in the 1870s for mine timbers (Sargent 1879:419-420 ; Young and Budy 1979:114).

NATIONAL REGISTER DISTRICT

In recognition of the town's historical significance, Eureka was designated a National Register District on April 13, 1973. The Eureka Historic District covers the town and surrounding terrain in an area 1.6 miles north-south by .8 mile east-west. The boundaries of the district are as follows: NW corner--115° 58'20" longitude, 39° 31'35" latitude; NE corner--115° 57'25" longitude, 39° 31'35" latitude; SE corner--115° 57'25" longitude,

39° 30'00" lattitude; SW corner--115° 58'20" longitude, 39° 30'00" latitude. The approximate legal description si T19N, R53E, Section 13, S 1/2 NW 1/4 NW 1/4, SW 1/4 NW 1/4, W 1/2 SW 1/4; Section 14, S 1/2 NE 1/4 NE 1/4, S 1/2 NW 1/4 NE 1/4, S 1/2 NE 1/4, SE 1/4; Section 23, NE 1/4, N 1/2 SE 1/4; and Section 24, W 1/2 NW 1/4, NW 1/4 SW 1/4; USGS Eureka, Nevada, 15' series, 1953.

The majority of the historic district consists of private lands which form the Eureka Townsite. The townsite was surveyed in the mid-1930s by the U. S. Department of Interior General Land Office and a plat map was drafted. In 1947, clear title was given to land owners in the townsite. Small portions of the northern and southern ends of the Eureka Historic District are lands administered by the USDI, Bureau of Land Management, Battle Mountain District Office, Battle Mountain, Nevada.

Since Eureka has been listed in the National Register of Historic Places, the town is recognized as one of the Nation's cultural resources that is worthy of preservation and protection. For this reason, the effects of federally funded projects that occur in the historic district have to be considered as specified by the National Preservation Act of 1966, as amended and implemented by Section 106 of 36 CFR 800; supplementary Advisory Council on Historic Preservation guidelines; Executive Order 11593; and the Archaeological Resources Protection Act of 1979. For private property owners, the fact that their buildings are listed on the National Register makes them eligible for federal historic preservation grants.

PROJECT HISTORY AND PURPOSE

At the time the Eureka Historic District was listed on the National Register, only a nomination form was completed, and no formal building inventory was conducted. In November 1980 and January 1981, an inventory of the district was initiated by Ana Koval and Charles Zeier who were then both with the Nevada Division of Historic Preservation and Archeology, Carson City. They were able to briefly inventory 121 historical buildings in Eureka during their surveys, but the project was never completed.

The 1985 Eureka Historical Building and Archaeological Survey arose from the need to complete the building inventory and provide a report on the historical and archaeological properties in the district to support the National Register nomination. During the past five years, the now-defunct MX plan and new mining ventures such as proposed at Mt. Hope by Exxon Minerals Company have indirectly threatened the integrity of buildings in the Eureka Historic District (cf. James and Elston 1984 and other reports in Mt. Hope Molybdenum Project, BLM Battle Mountain, Cultural Resources Technical Report No. 7). In fact, as a result of people moving into Eureka for mining or other reasons, several historic buildings have been torn down and replaced with mobile homes since the initial 1980 inventory. The Division of Historic Preservation and Archeology has needed a report on the historic resources in Eureka in order to assist in effectively managing and preserving the historic district.

The 1985 project was funded with the assistance of a matching grant (seventy percent) from the Department of Interior, National Park Service provided by the Nevada Division of Historic

Preservation and Archaeology. Thirty percent of the matching grant was funded by the Nevada Historical Society. The grant was awarded to Eugene Hattori and administered by the Nevada Historical Society under Director Peter Bandurraga. Before the project was scheduled to begin, however, Hattori accepted employment with Bechtel Corp. in San Francisco. Steven James was then asked to direct the project and gladly agreed to do so, particularly because of his long standing research interest in the archaeology and history of eastern Nevada. At the same time, Donald Hardesty, anthropology professor at the University of Nevada, Reno, was asked to participate because of his expertise and research in the historic archaeology of the region.

The report is divided into three major sections. The first section is a historical overview of Eureka with most of the emphasis on the boom years, 1870 to 1890. Next, the results of the building inventory is summarized and specific historic data on over forty buildings are presented. The third section is a discussion of the historic archaeological resources in the Eureka Mining District, an area that is much larger than the boundaries of the National Register District but is essential to understanding the town. An appendix of historical place names in the Eureka Mining District and their origin is also provided. The authors feel that the information presented in this report will be useful to researchers and cultural resource managers alike. Much of the data on the historical buildings in Eureka, for instance, contains documentary research that is not available in any published source.

HISTORY OF EUREKA

DISCOVERY AND EARLY MINING DEVELOPMENTS

The Eureka vicinity was first described on July 12, 1859, by Captain James H. Simpson of the U.S. Army Corps of Topographical Engineers when it was still in Utah Territory (Simpson 1876:113-114). While exploring for a wagon route across the Great Basin, the expedition camped in Eureka Canyon (Simpson's McCarthy's Creek and Canyon) on July 12th and the next day crossed the Diamond Range (his We-a-bah Mountains), north of the present route of U.S. Highway 50. Simpson remarked in his journal published in 1876:

> Indeed, the valley of McCarthy's Creek furnishes the best exhibition of mountain and bottom grass I have seen. It is almost inexhaustible...Cedar fuel, convenient, as also good limestone in lower portion of McCarthy's Canon, and a whitish tufa in lower portion, good for building purposes, available. This tufa so soft as to be easily sawed into blocks of suitable size, and so light as to be easily transported. Indeed, there are all the requisites in this valley of a good dragoon post...(Simpson 1876:114).

While Simpson recognized the canyon's potential as a site for a dragoon post, little did he realize that within twelve years it would be a mining boomtown.

Spurred on by the discovery of the Comstock Lode in 1859, prospectors focused much of their attention on central Nevada. In 1862, the Reese River Mining District and town of Austin were established, followed the next year by the Cortez Mining District, about 56 miles northeast of Austin. The Eureka Mining District, then in Lander County, was formed in September, 1864, when an ore ledge was discovered in New York Canyon above the future town by the Tannehill prospecting party from Austin (Angel 1881:426; Hague

1892:6; Molinelli 1879:11-12). The silver ore, which had to be transported to Austin 80 miles to the west for milling and refining, also contained large quantities of lead and required smelting, a technology which was not prefected for use on Nevada ores for several more years. Due to this difficulty, little interest was generated by the initial discovery and the mining district languished for several years (Browne 1868:411; Hague 1870:405).

Between 1864 and 1868 only 130 claims were recorded in the district, and the original discovers sold the Eureka Mining Co. in 1865 to New York capitalists represented by Major W. W. McCoy (Angel 1881:426; Curtis 1884:3). Sporadic financial attempts by the New York group to mill the lead-silver ore failed despite large outlays of cash and formation of the Eureka Smelting Company (Angel 1881:426, 439; Molinelli 1879:12). The Eureka Smelting Company's furnace was built at the later site of Reinhart and Company's feed mill (Angel 1881:439). In 1866, Moses Wilson unsuccessfully attempted to smelt ore at the Roslin Furnace site (Angel 1881:431). In 1868, Morris, Monroe, and Company had C. A. Stetefeldt construct a furnace; but, when completed in 1869, it also failed because of an insufficient blast and poor lining material (Molinelli 1879:15; Angel 1881:431). Stetefeldt's furnace later succeeded in October, 1869, in Reno, thus playing an instrumental role in the development of the Reese River milling process (Oberbillig 1967:32-35).

During this time, the White Pine "excitement" at Treasure Hill and Hamilton, thirty-five miles southeast of Eureka, brought renewed interest in the Eureka Mining District. In 1869, 354

claims were located, many of which were developed into mines (Angel 1881:426). Rich ore bodies encountered at Ruby Hill and Adams Hill in the district made the 1864 discovery site in New York Canyon near the Seventy-six mine seem insignificant.

Major McCoy acquired the Morris, Monroe and Company property in 1869. Under the direction of R. P. Jones and John Williams, who had experience in Wales, McCoy had the Stetefeldt furnace lined with refractory stone from the Pancake Range, twenty miles southeast of Eureka. As a result, successful smelting operations began in July, 1869. Later that year, Colonel David E. Buel and Issac C. Bateman bonded the Buckeye and Champion mines on Ruby Hill, and Colonel G. Collier Robbins purchased the Kentuck and Mountain Boy mines. Buel and Robbins, both representing the Buttercup Mining Company of New York, successfully began smelting operations in Eureka. Buel and Bateman leased from McCoy the Eureka Company's furnace, which along with their mines later formed the nucleus of the Eureka Consolidated Mining Company. The Eureka Consolidated smelter was first fired on April 25, 1870. Robbins built a draft furnace to smelt ores from the Mountain Boy mine. Shortly after these successess two additional mills opened, the Marcelina and the Wallace and Bevan mills. In May and June of 1870, the five Eureka District mills had smelted 859 tons of ore amounting to over $313,402 in bullion (Molinelli 1879:15-16; Angel 1881:429-431; Curtis 1884:3).

GROWTH OF THE TOWN

The 1870 rush to Eureka ushered in an influx of miners and merchants. In January, 1870, first postmaster George Haskell

named the town Napais, a Shoshoni word for silver, but changed it to Eureka only several weeks later (Molinelli 1879:23; Angel 1881:440; Frickstad and Thrall 1958:9, 21; Harris 1973:38). Major W. W. McCoy (southern portion) and Alonzo Monroe (northern portion) owned and surveyed the original townsite. Later, the Robbins and O'Neil survey on the west and the McDonald survey on the east extended the town's boundaries (Molinelli 1879:18; Angel 1881:439).

Early structures consisted of log cabins, adobes, and tents. In 1865, the Tannehill Company built the first log cabin, which later served as the first store, run by Nathan and Harrison. The first hotel in Eureka, the two-story Parker House, was moved from Austin, where it had served as the overland stage station and stable. It was initially at the north end of town across from the Eureka Consolidated smelter, but was later moved next door to where the present day Chevron Station is located. The first post office was established in the Parker House on January 13, 1870, with George S. Haskell as postmaster (Eureka Daily Leader, December 31, 1879; Angel 1881:439; Frickstad and Thrall 1958:9, 21; Harris 1973:38). Many other buildings were also moved from elsewhere in the region. For example, of forty-three houses erected in one week in 1870, there were 12 from Hamilton, 4 from Treasure City, 16 from Sherman, 3 from Carlin, and 3 from Elko (Eureka Sentinel, July 23, 1870, cited in Angel 1881:439). By October, 1870, the town's population had grown to about 2,000 from fifty the year before (Hague 1870:405; Molinelli 1879:13).

Eureka became an important transportation and supply center for east central and southeastern Nevada. Stage service connecting

Figure 1. Winter in Eureka during the 1880s. Part of the Courthouse is on the far left. The old public school next to the Catholic Church on Nob Hill is in the upper right (Nevada Historical Society, neg. no. 1).

the town with Austin and Hamilton was started in 1869 by John A. Wilson. In the spring of 1870, Woodruff and Ennor established a stage line between Palisade on the Central Pacific Railroad and Hamilton in the White Pine Mining District. Stage connections from Elko to Eureka and Hamilton were provided by Beachey, Wines, and Company in August, 1870. When the Eureka and Palisade Railroad was completed in 1875, Eureka became the depot for passenger and freight lines between towns such as Austin, Belmont, Tybo, Morey, Hot Creek, Tempiute, Pioche, Hamilton, Mineral City, Ward, and Osceola (Molinelli 1879:12-13; Angel 1881:285, 439). Freight teams at the time had eighteen mules pulling three to four wagons weighing 30,000 to 40,000 pounds each (Crofutt 1878:156-157). Mules were wintered at the 2,500 acre Hay Ranch in Pine Valley which produced some 600 to 1000 tons of hay during the summer (Crofutt 1878:156; Angel 1881:285).

The Eureka and Palisade Railroad Company (EPRR) was formed on November 19, 1873, by Erastus Woodruff, William Ennor, Monroe Salisbury, John T. Gilmer, C. H. Hemstead, and J. R. Withington (Angel 1881:284; Myrick 1963:90). Construction then began on the eighty-four mile narrow gauge route from the Central Pacific yards at Palisade to Eureka. In 1874, D. O. Mills, Edgar Mills, William Sharon, A. K. P. Harmon, John Shaw, Issac L. Requa, and Thomas Bell took control of the company (Angel 1881:284). The railway construction reached Alpha at the end of 1874, a distance of about forty-five miles, and the EPRR was officially completed on October 22, 1875 (Myrick 1962:91). Because of the production and shipment of lead throughout the United States, the railroad was

particularly important to the mining district. Earlier, in May 1875, the Eureka and Ruby Hill narrow gauge railroad had been completed between the Eureka Consolidated mines on Ruby Hill and their smelter at the north end of Eureka, a distance of three miles (Myrick 1962:91). It was purchased by the EPRR later that year.

The success of the Eureka and Palisade Railroad during the boom years encouraged some of the officers and investors to begin construction of a railroad extension to Callville on the Colorado River in 1881 (Angel 1881:438-439). The Eureka and Colorado River Railroad, however, was a little too late to be economical and plans for it were abandoned after the completion of ten miles of grading (Angel 1881:288; Myrick 1962:99). Portions of this work are still visible as one drives eastward along Highway 50 from Eureka. Another railroad which never went beyond the planning stages was the Nevada Midland Railroad. In 1881, the company, which included G. L. Wines as president, William F. Colton as secretary, and R. C. Lather as chief engineer, developed only a map of the proposed route westward from Eureka along present-day Highway 50 (Map dated Oct. 27, 1881, original on file at Eureka County Recorder's Office).

The Nevada state legislature passed an act separating Eureka County from Lander County on March 1, 1873, with Eureka as the county seat (Molinelli 1879:11). The township of Eureka was incorporated by the state legislature on March 1, 1877 (Angel 1881:439).

In 1878, the issuance of business licenses reflected the "healthy" tenor of the community--325 liquor licenses, 366

merchandise licenses, 157 hotel and lodging house licenses, 25 gambling licenses, 32 livery stable licenses, 6 bank licenses, and 15 theater and show licenses (Angel 1881:438). In 1882, the Corner Chop Stand at the rear of today's First Interstate Bank advertised the finest fowl, wild game, oysters, etc. at all hours of the day or night (McKenney 1882:642). Dessert could be obtained on Main Street at Brown and Godfrey's Restaurant and Confectionery, also open day and night (McKenney 1882:641). The nighttime hours of operations were due to split shifts in the mines and the twenty-four hour operation of the smelters. To allow a smelter furnace to cool involved a costly start-up process which was to be avoided if at all possible.

MINERS AND CHARCOAL BURNERS

The rich, deeply buried ores at Ruby Hill required special extraction techniques. The most skilled "hardrock" miners in the world were the tin miners from Cornwall, many of whom had already come to Nevada to work in the Comstock. The lures to do such hard and dangerous work in a "wild and wooly" place like Nevada were high wages and full employment--twice the rate of pay in England. The "Cousin Jacks," as they were called, made four dollars for a ten-hour shift in Eureka (Curtis 1884:150). As a result, the Cornish were a dominant segment of the Eureka work force, estimated at 600 in 1881 (Rowe 1974:191). Many of them were "birds of passage" who came to the American West with hopes of someday returning to their families in England with enough money to live comfortably (Rowe 1974:191-192).

Most of the general exploration and mine development in the country rock was performed by miners paid under contract. Under this system of labor, the companies furnished the timber, lumber, and tools, while the contractors supplied candles, powder, and fuses (Curtis 1884:150). The amount of money made by these miners depended upon how many feet of rock were excavated in a day. The rock's hardness and the equipment used influenced the amount paid to the contractor. The economics of this system were usually slightly in favor of the company and managed to average a little less than four dollars per shift (Curtis 1884:150).

The Ruby Hill Miners' Union was organized on October 16, 1873, in response to anticipated hard times caused by an interval of decreased ore yields, demonitization of silver, and potential wage reductions. Although the mines did not attempt to lower wages at the time, the unions maintained their organization and solidified their power base. In 1876, the British-owed Richmond Mining Company, feeling the weakness in the silver market despite acceptable yields, attempted to pay the miners in U. S. trade dollars. Unlike gold coins, the value of trade dollars floated according to the value of the silver they contained. Thus, in a depressed silver market their value was depreciated accordingly. The union resisted this change, and Superintendent Richard Rickard discharged the men paid daily wages and let the work out to independent contractors. The miners struck both the company and the contractors. Work in the Richmond mines ceased. But an agreement was soon reached with the miners to pay them in gold, and they returned to work for both the Richmond Mining Co. and the independent contractors (Lingenfelter 1974:79, 135).

An important mining-related industry in the region was the production of charcoal to fuel the Eureka smelters. Charcoal was made by cutting local pinyon and juniper stands and burning the wood in open pits or in kilns. One cord of pinyon produced between twenty-eight and thirty-three bushels of charcoal. Annual comsumption of charcoal in the 1870s was estimated at 1.2 million bushels. Widespread deforestation occurred as a result so that by 1878 the mountains around Eureka were denuded of pinyon and juniper within a radius of thirty-five miles (Whitehill 1879:27; Young and Budy 1979:117).

The majority of those employed as woodcutters and charcoal burners were Italian and Swiss-Italian immigrants. Some of these men had carried out this trade in Italy or Switzerland and were brought to Eureka for this purpose (Earl 1969:55). By about 1878, the Eureka Daily Sentinel estimated that there were 800 charcoal burners, ninety percent of whom were foreigners, employed by less than a dozen firms (Whitehill 1879:27). The charcoal was hauled by ten teamster companies some of which were owned by Italian or Swiss-Italian merchants in the town, such as Joseph Tognini and Company, Joseph Vanina, and Joseph Torre (Whitehill 1879:27; Eureka County Assessor's Records 1880:144, 151; Grazeola 1969:39). Another teamster outfit was owned by German merchant Reinhold Sadler and Company (Grazeola 1969:37); in later years, Sadler became governor of Nevada.

The lot of the Italian charcoal burners or "carbonari" in Eureka was not very desirable. They were paid much less than what the miners received and were apparently pawns in the hands of the

merchant-teamsters and smelter operators (Earl 1969:55). The going rate for a charcoal bushel in 1878 was twenty-five cents delivered to the smelters by the teamsters. On the other hand, the burners received only about thirteen cents per bushel which was often credited to the burners for high priced goods sold by the teamster companies rather than paying them in cash (Earl 1969:52, 56-57).

The plight of the charcoal burners came to a head on July 6, 1879 when about 500 of them met in Celso Tatti's saloon on north Main Street and formed the Eureka Coalburners Protective Association (Eureka Daily Leader, July 7, 1879; Reichman 1967:48; Grazeola 1969:35; Earl 1969, 1979). Parenthetically, the present historical research has established that this building still exists today. The Association demanded thirty cents a bushel to be paid in cash, or they would stop all charcoal production.

During the ensuing weeks, negotiations with the Eureka and Richmond mining companies were not productive. Several teamsters were kept from hauling charcoal, and some Italians were arrested. The Nevada militia was finally called out by Governor Kinkead in mid-August to prevent any major violence. Ironically, on August 18th, a sheriff's posse confronted over a hundred Italian burners at Fish Creek, a major charcoal producing area south of Eureka. Although accounts differ, the posse apparently opened fire on the crowd. The incident, which became known as the Fish Creek War, resulted in the deaths of five Italians and wounded six others. The bodies of the five men were taken to Schwamb's undertaking establishment in town (Eureka Weekly Sentinel, August 30, 1879, 3:2), and later buried in unmarked graves. A maker has only

recently been placed on their graves in the City cemetery. Murder charges were filed against the posse, but these were later dismissed, as were other charges against Italians arrested during the strike. Within a few months, the entire affair of the charcoal burners had quieted down and was nearly forgotten (for further details on the charcoal burners, see Angel 1881:438; Earl 1969, 1979; Grazeola 1969; Shepperson 1969:24-26; Young and Budy 1979).

TOWN DISASTERS

The business districts of early Western mining communites were initially constructed of frame buildings closely spaced together. These crowded conditions often invited destruction from fires. Eureka was no exception and suffered accordingly on several occasions, despite the presence of five fire hose companies--the Rescue, Knickerbocker, Nob Hill, Eureka Hook and Ladder, and Richmond (Angel 1881:439). It was only after these disasters that most brick and stone structures with "fire-proof" iron shutters and doors were built. Many of these still stand today.

While small sections of the town were destroyed by several fires in the early 1870s, the worst one occurred on April 19, 1879 (Eureka Daily Leader, April 19, 1879; Eureka Daily Sentinel, April 20, 1879; Angel 1881:440). The fire started in Bigelow's Opera House on Buel Street when a lamp exploded in the green room. It then spread to the Sentinel office, Masonic Hall, and Western Union Telegraph, buildings which were all located on Buel Street at that time. The flames traveled east and north down Buel,

Spring, and Main streets. Nearly all the buildings in the northeastern part of town were destroyed, except for the Jackson House and the front of Jack Perry's saloon on the corners of Main and Bateman, Paxton and Company's bank on Main, and the Sentinel's stone job office on Buel. The only fatality was Mr. Moch, of Moch's restaurant, who was confined to bed and unable to escape. Total damage was estimated at one million dollars and 2,000 people were left homeless. The town was rebuilt and aid, both materials and money, was raised throughout the state.

The following year, on August 17, 1880, another disasterous fire followed the same path as the 1879 blaze, destroying over 300 buildings (Eureka Daily Sentinel, August 18, 1880; Angel 1881:440-441). The fire began in the rear of Mrs. Poplin's fruit and vegetable store on Main Street, which was located just south of the present post office. Surviving structures included Jack Perry's saloon, the Douglas building, the Foley-Rickard building, Paxton and Company's bank, Jacob Cohn's store, Schneider's drug store, and Lautenschlager's saloon. These businesses were on the east side of Main Street between Bateman and Clark streets, in buildings that are for the most part still standing today.

Eureka experienced a third major fire on September 22, 1884 (Eureka Daily Sentinel, September 23, 1884; Reichman 1967:75). The blaze, which began in the kitchen of the Parker House Restaurant, destroyed a number of businesses on the west side of Main Street between where the Chervon Station and the Sundown Motel stand today. Buildings lost in the fire, many of which were never rebuilt, included the famous Parker House hotel and restaurant, Morris Brothers' saloon, Alf Harris's clothing store,

P. Steler's jewelry store, and Woodruff and Ennor's buildings occupied by the White Pine County Bank and M. Calisher's stationery store. The fire was stopped by M. J. Franklin and Company's fire-proof stone building, a structure that was demolished in recent years to make way for the Sundown Motel.

Floods also devastated many Nevada mining towns. Austin, Mazama, Rawhide, Dayton, and Pioche were partially or totally destroyed by floods at various times. Similarly, Eureka had several major floods in the early years. The potential danger of Eureka's location in a canyon was increased by the severe deforestation from charcoal production and the demand for firewood (cf. Young and Budy 1979; James and Elston 1984:38). Compounding the problem and increasing the tendency toward flooding was the prevalent pattern of summer thunderstorms.

On July 24, 1874, a late morning rainstorm over Eureka extended up the canyon, and runoff from two drainages cascaded down city streets for half an hour (Angel 1881:441). The three-foot deep torrent carried away or wrecked thirty buildings, including the Eureka Hall, Eureka Consolidated furnace, and A. E. Davis's stables. Sixteen people were killed in the disaster.

Exactly two years later on July 24, 1876, a torrent of water flowed down Spring and Buel streets from the southern end of town (Angel 1881:441). The flood, fortunately, was contained by the ditch on Spring Street and little damage was sustained. The Richmond Company Mill whistle sounded the alarm for a flood on August 15, 1878 (Angel 1881:441). This early evening flood originated in Pinto Canyon and swept through town causing about

$75,000 in damage. A minor flood the next day caused an additional $5,000 worth in damage.

AFTER THE MINING BOOM

Nevada's high desert environment often conceals copious quantities of active and fossil groundwater. Water is the bane of mining operations. Too much water and mining is hindered, while too little water means both milling and hoisting are hindered. Eureka was supplied with water from local springs in Eureka Canyon. At Ruby Hill, an elaborate water system fed by outlying springs and a reservoir in New York Canyon was established to bring water to the town and to supply water for the hoisting works and mill. Then, in 1881, water was encountered at the 765 foot level of the Eureka Consolidated mine on Ruby Hill (Lincoln 1923:89). The Eureka shaft completely flooded in 1882 necessitating permanent pumping operations. The problem with the water was widespread because the mines were usually connected for improving ventilation and safety. The Eureka Consolidated water flowed down a winze to the Richmond mine where it stablized at about the 1,050 foot depth (Curtis 1884:107). Other Ruby Hills mines also encountered water which greatly increased the operating costs (Curtis 1884:Plate III).

Adding to the water problem was the exhaustion of bonanza ore bodies. Exploration of new leads was hindered by the water encountered at lower depths. The widespread institution of the tribute system between 1885 and 1890 epitomized the dire situation of the mines (Lincoln 1923:89). The 1890s were generally bad times for Nevada mining. In the Eureka Mining District, the Eureka Consolidated and Richmond mining operations were charged by the

federal government with misusing the surrounding pinyon-juniper woodlands. Because of potential civil and criminal suits against the Eureka Consolidated and Richmond Companies, both mills suspended operations in 1889 while the matter was being resolved (Wren 1889:67). In 1890, the Richmond Smelter closed, and in 1891, the Eureka Smelter followed suit (Lincoln 1923:89).

By the turn of the century, Eureka's population had dwindled to about 1,000 people. Mining was revived in 1905 when the two former rival companies were merged as the Richmond-Eureka Mining Company to rework the old mines. The ore was shipped by rail 380 miles to Salt Lake City for processing at the smelters of the United States Smelting, Refining and Mining Company (Ingalls 1907).

A description of Eureka during this time is provided by geologist Walter Ingalls (1907):

> Eureka is not exactly dilapidated. On the contrary it exhibits rather a trim appearance in spite of the rows of shops with shutters closed on doors and windows since many years ago...Indeed,it is a mystery how the town has lived so well during the long years of stagnation in mining and has supported the many excellent retail stores, and two hotels--one particularly good--which it has today. Even now the number of miners in the district is only about 200, most of whom live at the mines and being chiefly foreigners do not spend their money in the old-fashioned, reckless American way, so that the tradespeople and saloon-keepers say that business is not materially better than before the mines were reopened.

Nevertheless, the resurgence was short-lived, and the Richmond-Eureka operations were curtailed in 1912 (Nolan 1962:3).

Mineral production since then has flucuated depending upon the market. Mining developments in later years include work by the Ruby Hill Development Company in 1919, the Richmond-Eureka

Company in 1923, and the Eureka Corporation, Ltd., in 1937 (Nolan 1962:3), as well as more recent mining ventures. Another stimulus to Eureka's economy since World War II has been the agricultural developments in Diamond Valley.

INVENTORY RESULTS

From the 1980-81 and 1985 building inventory surveys, 145 historical buildings in Eureka have been identified. Each building was assigned a number, recorded on an inventory form, and photographed. Building locations were plotted by block and lot on a large scale map of Eureka obtained from the County Assessor's Office. The inventory forms and maps are on file at the Division of Historic Preservation and Arch eology (HP&A) in Carson City.

The present survey focused on relocating the 121 buildings identified in the 1980-81 survey, plotting their locations on the town map which had not been done previously, and completing and updating the building inventory forms. An additional twenty-four buildings were recorded that were not listed in the earlier survey.

Unfortunately, four historical buildings recorded in 1980-81 are no longer standing. These are HP&A Building Nos. 19, 64, 84, and 117. Building No. 19, a former blacksmith shop, collapsed from snow in the winter of 1983. The other three buildings were residences that were apparently demolished, two of which have been replaced by mobile homes. Additionally, the impressive second story of the Rickard-Foley-Johnson-Remington Building (HP&A No. 28) downtown on Main Street was demolished in 1983 since the owner apparently felt it was unsafe. The rear portion of the Masonic Building (HP&A No. 13) was also removed and a retaining wall has been built to help stablize the structure.

HISTORICAL BUILDING DATA

The major aspect of the present project was to determine historical data on significant buildings in the town, particularly those on Main Street. Data on over forty buildings and important sites are described in this section. Their locations are shown on Maps 1 and 2. The majority of the descriptions focus on extant buildings--when they were built, the type of businesses that existed in them, and the merchants who ran the stores. Some locations describe buildings that are no longer standing, but were well-known places in the early days of Eureka. Before moving on to the descriptions of these buildings, a discussion of the actual sources used in this study and the problems encountered are in order.

Numerous historical sources were examined in order to ascertain the story behind the buildings. These included Sanborn maps of Eureka, Eureka County Assessor's Records, historical business directories, Federal census records, Eureka newspapers, historical photographs, published geological and historical accounts, and conversations and interviews with Eureka residents. In many ways, the research on the buildings was akin to putting together a complicated jig-saw puzzle. Almost all the pieces were available, they just had to be found and pieced together from the historical sources, a matter which turned out to be quite time consuming.

The business directories and newspaper ads provided the names of merchants in the town during the 1870s and 1880s, but quite often it was hard to determine which building they owned or

operated. In these sources, merchants usually only gave Main Street as their address or sometimes referred to their businesses in relation to other merchants or buildings which no longer exist or building names which have changed over the years. For example, an 1884 newspaper ad for the Oyster Saloon, Chop House and Confectionery stated the location as "Main street, one door north of Postoffice" (Ad in Eureka Daily Sentinel, September 23, 1884). Unfortunately, the post office was located in several buildings during the 1870s and 1880s making it hard to determine exactly where on Main Street the Oyster Saloon was. Additional information was gained by knowing that the proprietors were Brown and Godfrey, as mentioned in the ad, but only through the use of other sources could the building be located with any certainity. If Main Street only had addresses, the task would have been much simplier. But even today, very few Eureka merchants use street addresses.

By far, the Sanborn maps are the most important data source on the historical buildings in Eureka. During the nineteenth and first half of the twentieth century, the Sanborn Map Company produced maps of the downtown areas of most major cities in the United States for fire insurance companies. These maps, generally at a scale of fifty feet to the inch, listed the types of businesses that were conducted in the buildings; the construction materials used in the buildings, i.e., wooden frame, brick, or stone; the number of stories they contained; and other important data about the structures for fire purposes. Five sets of Sanborn maps were made of downtown Eureka for the years 1881, 1886, 1890, 1907, and a version of the 1907 map updated to 1941.

During the present study, two sheets of the 1881 Sanborn maps were discovered at the Eureka County Recorder's Office. Prior to this, the 1886 maps were believed to be the earliest Sanborn maps of Eureka (Moody 1979:134; Library of Congress 1981:369). The other four sets of maps are only available at the Nevada Historical Society and the Library of Congress.

Historical buildings in Eureka were traced back using the Sanborn maps as a means of establishing a relative date for when they were erected. The types of businesses listed on the maps were used in conjunction with the other sources to determine the names of store and building owners.

Another important data source was the Eureka County Assessor's Records. The original records which extend back to 1873 are housed in the attic of the Eureka County Courthouse. Fortunately, we were allowed complete access to these records, which proved to be invaluable in the research. The Eureka County Assessor's Records listed the owners of buildings in the town by block and lot and whether the buildings were constructed of brick, stone, or wood. By determining the block and lot of a building that exists today and checking the Sanborn maps to see if that building stood in the 1880s, we were able to determine who the owners of some of the buildings were. These data were then checked against the newspaper ads and busniess directories for accuracy and for the type of business an owner had. To determine when a building was constructed, the owners were then traced back on a year by year basis in the County Assessor's books until a change in the type of structure was noticed. For example, if a

building was a frame structure in 1878 on a particular block and lot, and in 1879 only a brick structure was assessed on that same lot, then it was assumed that the brick structure which still exists today was built between 1878 and 1879. Sometimes the newspapers from that time noted when the structures were erected, which helped to narrow the time range.

The County Assessor's Records were found to be faster than following recorded deeds, particularly since ownership data for a number of buildings had to be collected. Nevertheless, some problems were encountered with the assessor's records. These concern changes in the block and lot numbering systems. The block and lot numbers that are used today extend as far back as 1880 with only minor changes such as the addition of other lots in a block. Prior to 1880, the block and lot numbers are completely different, and each section of town follows one of four surveys for the original Eureka Townsite--the Monroe, McCoy, Robbins and O'Neil, and McDonald surveys (cf. Molinelli 1879:18). As we found out, the Sanborn maps for 1881, 1886, and 1890 used the block and lot numbers for the original surveys, and we were able to correlate the blocks prior to 1880 with the numbers used today. Later, we discovered in the Eureka County Recorder's Office an original townsite map from the 1870s showing the earlier block and lot system which verified our assumptions.

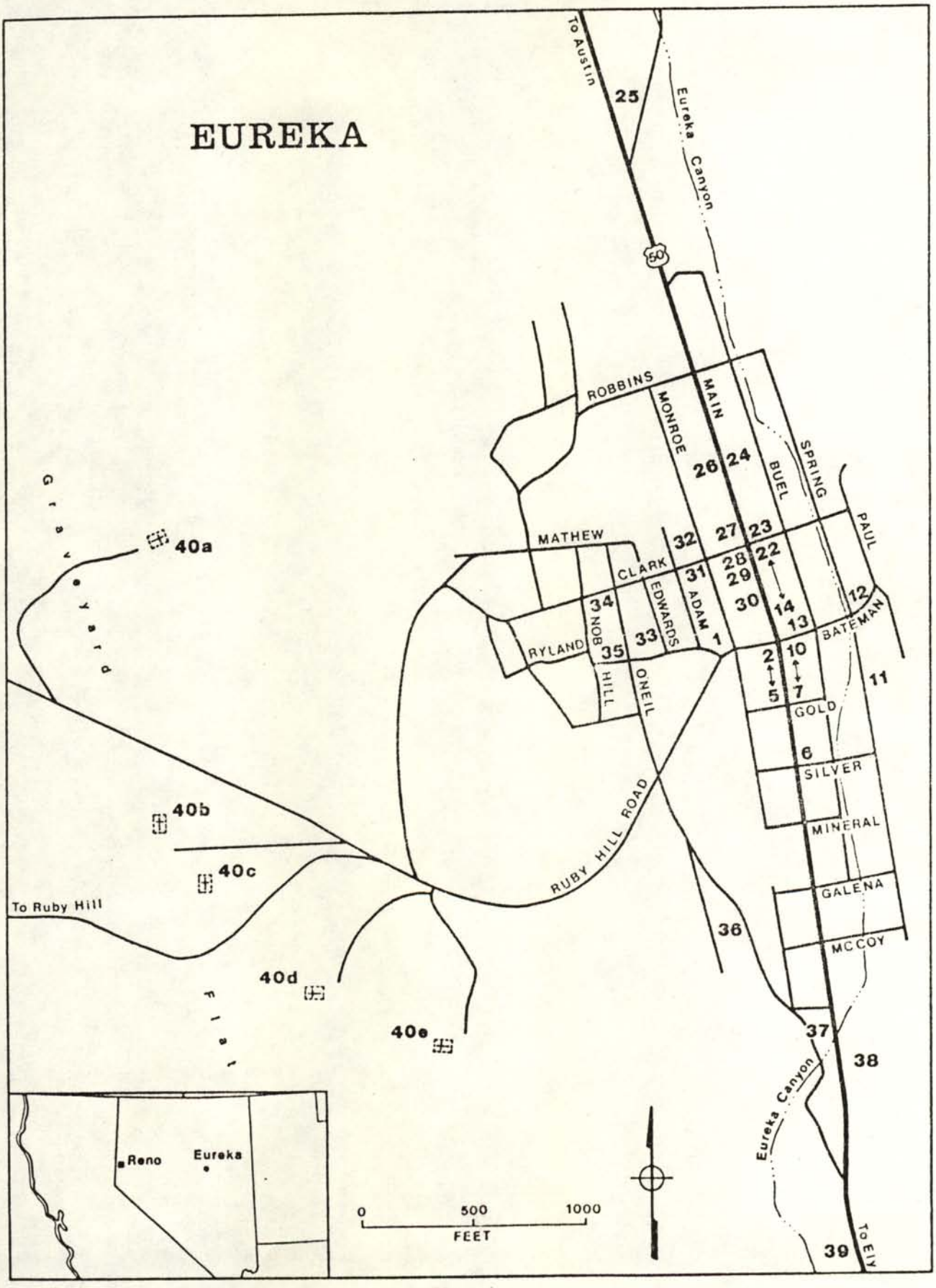
Historical photographs are yet another important research tool, not only for the subject matter which the photographer intended to portray, but also for details contained in the background that may have been inadvertently photographed. For

example, the latter has been the focus of several comparative studies on historic vegetation changes in the Great Basin (Rogers 1982) and Southwest (Hastings and Turner 1965). In another study, Lawton and Wilke (1977) examined the background of an ethnographic photograph in an enlargement to discuss aboriginal agriculture on the Lower Colorado River.

Historical photographs at the Nevada Historical Society and Eureka County Museum were very helpful in determining where certain business were located and for other building data. However, there were problems with using some of the photographs that need to be mentioned. Many of the photos are undated. In some instances, when there were dates, they were inaccurate as evidenced from other data sources. Similarly, photo captions were not always correct.

Every attempt has been made to be as accurate as possible in the historical sketches that follow. For the reasons discussed, the information presented here is not flawless by any means. It is hoped that future researchers will build upon what we have done. Much of the present research focused on the late 1870s and early 1880s when most of the brick and stone buildings on Main Street were erected, many of which are still standing today. Needless to say, historical information from the 1920s to the present was not researched in great detail, and it would be a good place for someone to start in the future. We now turn to the historical data on the significant buildings and sites in Eureka.

Figure 2. View overlooking Eureka to the southwest about 1916 (Nevada Historical Society, neg. no. 11).


EUREKA
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Eureka Canyon
50
ROBBINS
MONROE
MAIN
BUEL
SPRING
PAUL
26
24
MATHEW
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23
CLARK
31
28
29
22
30
14
13
12
RYLAND
NOB HILL
34
35
EDWARDS
33
ADAM
1
BATEMAN
2
5
10
7
11
GOLD
6
SILVER
MINERAL
GALENA
MCCOY
RUBY HILL ROAD
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To Ely
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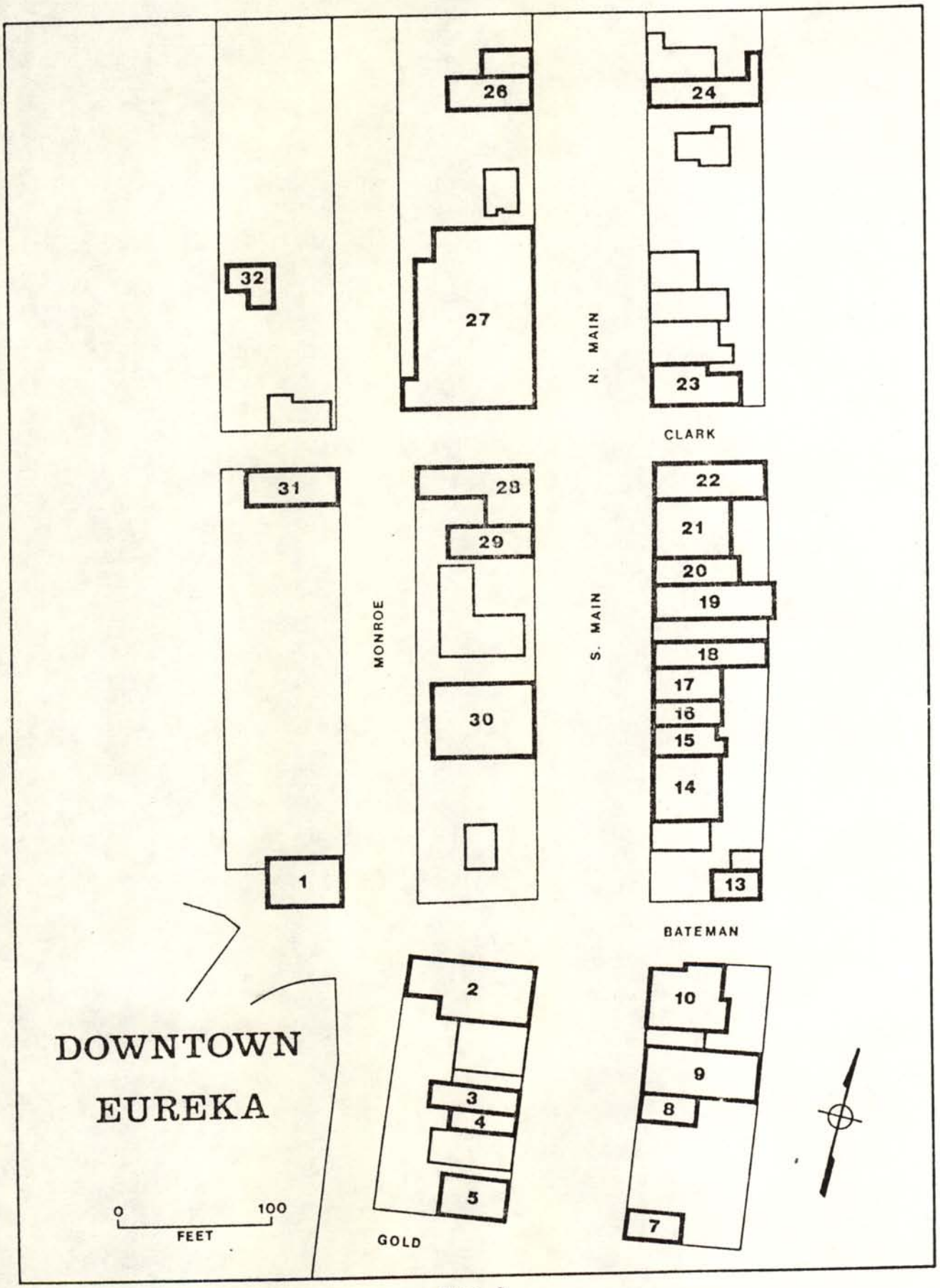
Map 1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CLARK
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MONROE
S. MAIN
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15
30
14
1
13
BATEMAN
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10
DOWNTOWN
EUREKA
3
9
4
8
0
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5
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GOLD

Map 2

1. EUREKA COUNTY MUSEUM/SENTINEL BUILDING (HP&A Bldg. No. 55)

The Eureka County Museum, which opened on June 19, 1982 (Winzeler and Peppin 1982:2), is located in the building once occupied by the Eureka Sentinel, the town's longest running newspaper (Figure 3). In the Museum are exhibits and displays that show what the town was like during the early days. The Museum is a must for vistors to Eureka. Admission is free, and it is open to the public throughout the summer months.

The Sentinel Building was designed by architect C. M. Bennett and was constructed at a cost of $10,000 for the newspaper. The Sentinel moved here when it was completed in August 1879 from an earlier location at No. 5 South Buel Street (see addresses in subscription section Eureka Daily Sentinel, August 5 and 6, 1879). The newspaper described their new headquarters as "the finest building used as a publication office in the State, or indeed on the coast outside of San Francisco" (Eureka Weekly Sentinel, August 30, 1879). As were other buildings in town, this two-story structure was built from locally fired bricks. Similarly, the stone blocks around the windows, over the doors, and on the corners were quarried from local volcanic tuff that came from above the west side of town at Chandler's Quarry. These blocks were cut by Tom Sheridan (Eureka Weekly Sentinel, August 30, 1879), for whom Sheridan Street is named. The Eureka Sentinel was published in this building until 1960. An 1872 Fairhaven printing press, other printing equipment, and historical posters from the town are in the back room of the museum. The County Extension Service and other offices currently occupy the second floor.

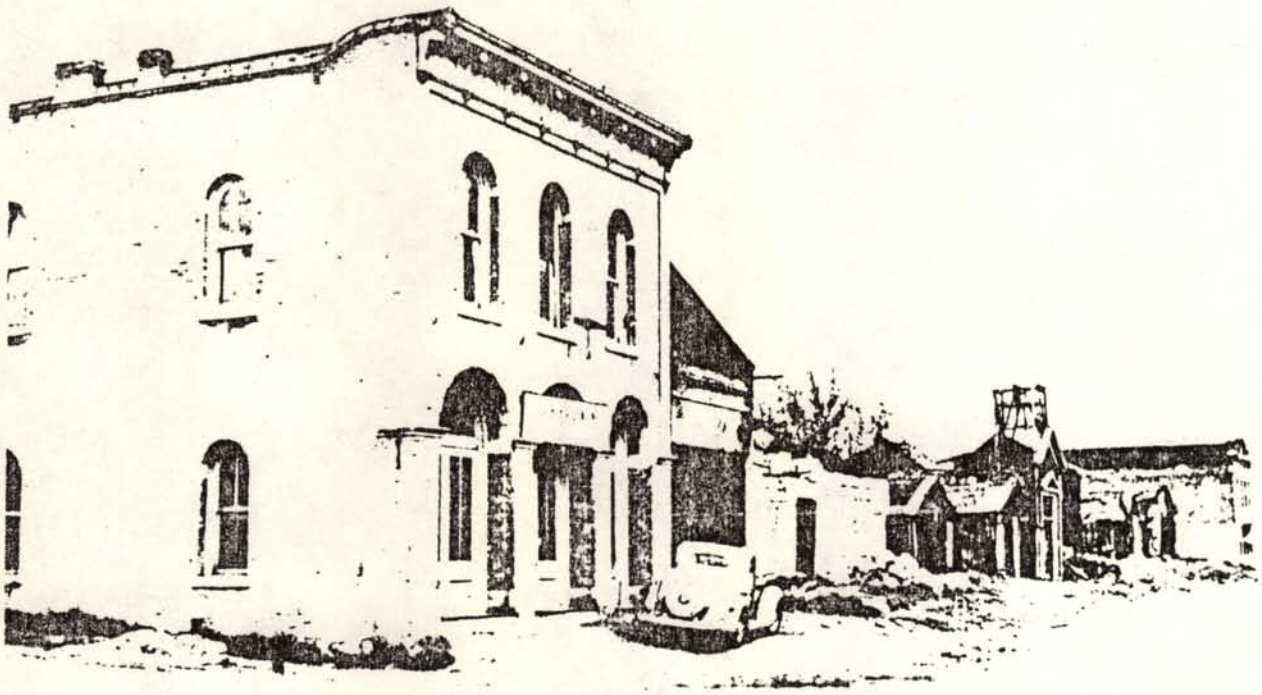

Figure 3. Sentinel Building in the 1930s. Old Rescue Firehouse and Colonade Hotel can be seen on the right farther down Monroe Street (Nevada Historical Society, neg. no. 19).

2. EUREKA COUNTY COURTHOUSE (HP&A Bldg. No. 42)

Between 1871 and 1873, a roller skating rink existed where the courthouse stands today. The owner then presented the property to the County (Angel 1881:426). The first courthouse was a frame building that was was put up for public action in 1880 (Ad in Eureka Daily Sentinel, January 3, 1880). The present Eureka County Courthouse, a two story brick structure, was started in 1879 and was completed in June 1880 at a cost of $55,000 for the building and about $15,000 for the jail, vault, and fixtures (Eureka Daily Leader, December 31, 1880; Angel 1881:440). At the time, the courthouse was the finest in state outside of Virginia City. Iron shutters, which were used in case of fire, are still present adjacent to the windows and doors. An ornate cornice is visible on the top of the building. Inside, the courtroom on the second floor retains its turn-of-the-century style.

The two large bells on either side of the front door were at one time used by the local volunteer fire companies. One bell was cast in 1876 at the Buckeye Bell Foundry of Vanduzen and Tift, Cincinnati, Ohio. The other is the Eureka Bell cast by W. T. Garratt of San Francisco in 1881.

3. TOMMYKNOCKER SHOP (HP&A Bldg. No. 40)

This red brick building with iron columns was built in 1880 by Mason B. Bartlett who ran a wholesale liquor store here (Eureka County Assessor's Records [abbreviated below as ECAR] 1879:10, 1880:18; Ad in Eureka Daily Sentinel August 18, 1880; McKenney 1882:637; Sanborn Map 1881). In 1890, the building served as a post office and stationery store, but was vacant by 1907. As of

1941, it was again a post office (Sanborn Maps 1886, 1890, 1907, 1941).

The vacant frame building next door to the north (HP&A Bldg. No. 41) also has a long history of use dating from the 1880s when M. B. Bartlett owned it (ECAR 1881:13). It was a grocery store in 1881, a saloon in 1886, and a shoe and harness shop in 1890 (Sanborn Maps 1881, 1886, 1890). In the 1920s, Magda States ran the States Grocery Store here (1924 ad on Eureka Theatre stage screen; Mabel Anderson, personal communication, 7-13-85).

4. EUREKA SENIOR CITIZENS CENTER (HP&A Bldg. No. 39)

Beneath the white stucco front of this building is a brick structure that was erected in the summer of 1880 by Mason B. Bartlett and B. F. McEwen (ECAR 1879:10, 1880:18, 96). The original iron fire doors and columns, cast by the local Eureka Foundry Company in 1880, are still present (Eureka Daily Leader, June 3, 1880, p. 3). McEwen ran a grocery store here in the early 1880s (McKenney 1882:639; Sanborn Map 1881). Undertaker and cabinetmaker Peter H. Hjul had a furniture business in the late 1880s and 1890s (McKenney 1886:880; ECAR 1886; Sanborn Maps 1886, 1890). By 1907, a variety store occupied the building, and in the years before World War II it served as a mortuary (Sanborn Maps 1907, 1941). By way of contrast, the new portion of the Senior Citizens Center next door was completed several years ago and dedicated on July 13, 1985.

5. HISTORICAL TURNER HOUSE/BUREAU HOTEL (HP&A Bldg. No. 38)

In the 1870s and early 1880s, B. J. Turner had a two-story frame hotel on this corner known as the Turner House (ECAR

1875:196, 1880:142; Ad in Molinelli 1879:116; McKenney 1882:640). Turner came from Hamilton in White Pine County, Nevada, where he was proprietor of the Occidental Hotel in 1871 (Langley 1871:357). P. McElroy acquired the property about 1884 and opened the Bureau Hotel, an establishment which McElroy previously had operated on the east side of south Main Street between Silver and Mineral Streets (McKenney 1882:639, 1886:878, 880; Ad in Eureka Daily Sentinel, August 24, 1884; Sanborn Map 1881).

The building continued to serve as a lodging house upstairs with a resturant and saloon downstairs in the 1890s (Sanborn Map 1890). By 1907, a bakery was operating in the north half of the first floor, but the rest of the structure was vacant (Sanborn Map 1907). In the 1920s, John Landa operated a grocery store on the ground floor and a lodging house upstairs (Al Biale, interview, 7-13-85; Mabel Anderson, personal communication, 7-13-85; 1924 ad on Eureka Theatre stage screen). The building was still used as a lodging house prior to World War II (Sanborn Map 1941), but sometime after 1949 (cf. Beebe and Clegg 1949:154), the second story was removed. Original clapboard siding as shown in an 1880s photo of the Bureau Hotel (Figure 4) is visible in several places beneath the present shingle exterior (Note: Beebe and Clegg [1949:154] published this photo but attributed the stagecoach to Wells Fargo's Ely-Eureka line when it was really the White Pine stageline. The authors also designate the large structure in the background as a "substantial brick warehouse" which is actually the Eureka County Courthouse).

Figure 4. White Pine Stage in front of Bureau Hotel on corner of Main and Gold streets in mid-1880s. A portion of the Courthouse is to the right (Nevada Historical Society, neg. no. 34).

6. VICTORIAN HOUSE (Private Residence) (HP&A Bldg. No. 36)

This small Victorian residence on the northeast corner of Main and Silver Streets was constructed for Mrs. C. C. Wallace in 1887 (ECAR 1887:153; Figure 5). Her husband was County Assessor and a general business agent in the early 1880s (McKenney 1882:640. Earlier in 1881, a livery and feed stable covered this end of the block, and a small store owned by J. C. Powell was present on the corner (ECAR 1880:115; Sanborn Map 1881).

7. HISTORICAL SAN FRANCISCO BREWERY (HP&A Bldg. No. 35)

In the mid-1870s, Rudolph Leuzinger ran the San Francisco Brewery in this location opposite the Turner House (Eureka Daily Sentinel, January 1, 1874). By the late 1870s, Henry Mau and Company had acquired the brewery and saloon, while Leuzinger purchased a hardware business down the street where Stephenson's Video Store is today. After the fire of August, 1880, destroyed their frame building, Mau and Company erected the present brick structure (ECAR 1880:91; 1881:97; Ad in Molinelli 1879:122; Eureka Daily Leader, December 31, 1880). Fred Heitman assumed ownership of the San Francisco Brewery around 1883 (ECAR 1883) and continued to operate the company with Mau (McKenney 1886:880). After the turn-of-the-century, Frank J. Brossemer ran the saloon (Polk 1912:97) and bottled soda pop in the rear (Sanborn Map 1907). For some years after 1941, the Eureka Post Office was located here, until it was moved up the block to its present location about 1982. The building now serves as an office. Original iron shutters used for fires are present on the side windows.

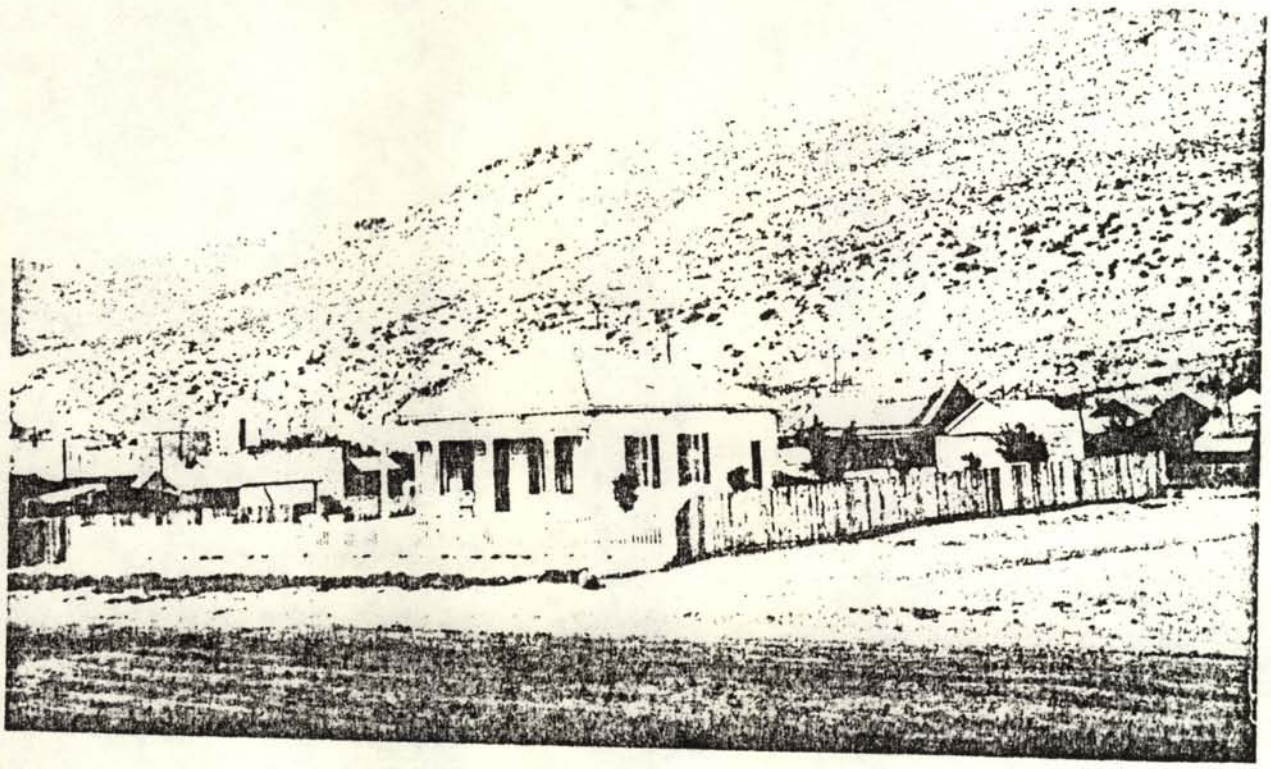

Figure 5. Victorian house built about 1887 on corner of Main and Silver streets. This photograph was probably taken about that time (Nevada Historical Society, neg. no. 21).

During the 1870s and 1880s, photographer Louis Monaco ran the City Photograph Gallery adjacent to the San Francisco Brewery. It was a two-story frame structure which burned in the 1880 blaze. Many early historical photographs of Eureka were taken by Louis Monaco and his brother.

8. EUREKA POST OFFICE (HP&A Bldg. No. 130)

Concealed beneath this modern exterior for the recently remodeled post office is a historical brick building. The structure was originally erected by Joseph Winzell soon after the August 17, 1880, fire which started next door to the south at Mrs. Poplin's fruit stand (ECAR 1880:113, 1881:147; Angel 1881:440; Eureka Daily Sentinel, August 18, 1880). William Zadow ran a butcher shop called the Eureka Market here in the 1880s (Sanborn Maps 1881, 1886, 1890; Ads in Eureka Daily Sentinel, January 3, 1884, April 11, 1884). Although the front has been modified extensively, a portion of the orginal window frames are still visible as shown in an 1880s photo of Zadow's shop (Figure 6). Inside the building, an old pressed tin ceiling with floral and bird designs can be seen. In the 1940s and 1950s, Eureka Meat and Groceries occupied the building (Nevada Telephone Directory 1949:16).

9. EUREKA OPERA HOUSE AND THEATRE (HP&A Bldg. No. 33)

During the 1870s and early 1880s, Eureka had several theater halls for operas, plays, concerts, ballroom dances, and other social events. These included Bigelow's Hall, Eureka Hall, and this building, the Eureka Opera House.

Bigelow's Hall was located on the corner of Buel and Bateman streets and was erected about 1874 by Jesse D. Bigelow (Eureka

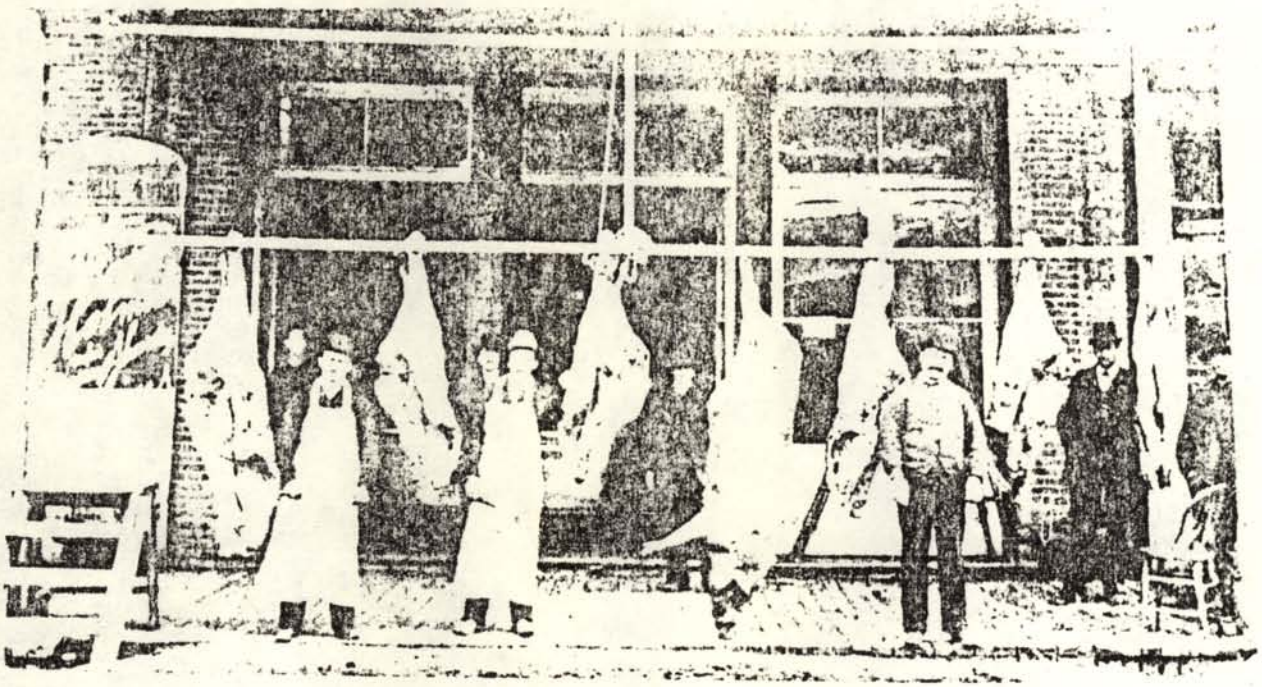

Figure 6. William Zadow's butcher shop in the 1880s, now the post office, next door to the Eureka Opera House. William Zadow is the third man from the right. This photo was taken about the same time as Figure 6, since both photos show the same poster (Nevada Historical Society, neg. no. 57).

Daily Sentinel, October 23, 1874). In 1878 or 1879, Bigelow's Hall became known as the Eureka Opera House under proprietor Mason B. Bartlett (Ads in Eureka Daily Republican, January 24, 1878; Molinelli 1879:123). Often confused with the later Eureka Opera House on Main Street, Bigelow's Hall or Opera House on Buel Street was the starting point for the April 19, 1879 fire which destroyed the northeastern part of downtown, including the opera house (Eureka Daily Sentinel, April 20, 1879; Angel 1881:440). Bartlett rebuilt the hall, only to have it destroyed again in the August, 1880, blaze (Eureka Daily Sentinel, August 18, 1880).

The Eureka Hall was also on Buel Street just south of Clark where the City Park is today (Sanborn Maps 1886, 1890). The Eureka Hall Company, a public committee formed in 1879 with Thomas Wren as president, had the hall built in that year for a little over $11,000 with money raised from stocks purchased by local merchants (Eureka Daily Sentinel, October 3, 1879, December 14, 1979; Eureka Daily Leader, December 31, 1879). It was a fine brick theater with a seating capacity of about 750. Unfortunately, the building was destroyed in the August, 1880, fire. An attempt to rebuild it was initiated in December, 1880 (Eureka Daily Leader, December 31, 1880), but it was apparently never completed (Sanborn Map 1886). Until after the turn-of-the-century, the ruined walls of the Eureka Hall were visible in the town (Sanborn Maps 1886, 1890).

The Eureka Opera House on Main Street was constructed on the foundation of the old Odd Fellows Hall between October and December 1880 by Richard Ryland, Joseph Winzell, and M. D. Foley

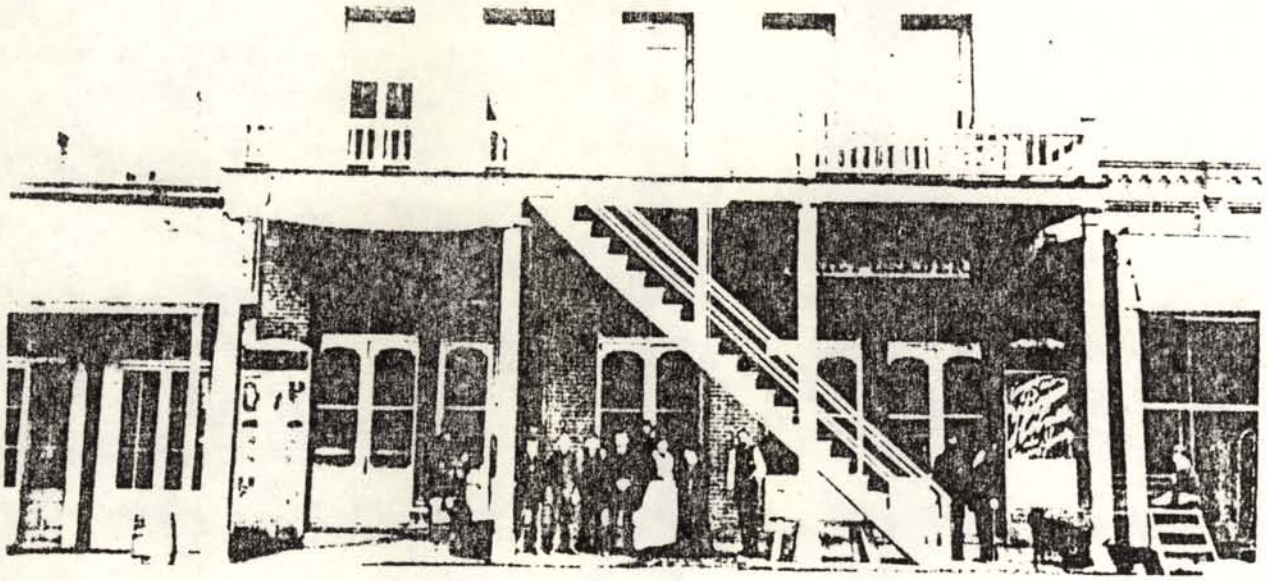

Figure 7. Eureka Opera House on south Main Street in the 1880s. As shown in the photograph, the Eureka Daily Leader, the town's evening newspaper, occupied one of the front offices at the time. (Nevada Historical Society, neg. no. 48).

(Eureka Daily Sentinel, November 11, 1880). The Odd Fellows Hall, a large two-story stone structure owned by Alexander Forbes of San Francisco, was destroyed earlier in the year during the disasterous August fire (Eureka Daily Sentinel, August 18, 1880, August 29, 1880; ECAR 1880:54). A contemporary account described the new opera house as thoroughly fire-proof, with two-foot thick masonry walls, a brick and iron front, and a slate roof. "The auditorium is 55 feet deep by 40 in width, is level, and especial care has been taken in the laying of the floor to have a good one for dancing," wrote the Eureka Daily Sentinel on November 11, 1880. Seating capacity was estimated between 400 and 500 persons. Two stores on the first floor in the front and offices on the second floor were likewise a part of the original design. In the 1880s, the stores on the street contained a saloon and grocery store (Sanborn Maps 1881, 1886). The office of the Eureka Daily Leader was also here, as shown in an 1880s photograph (Figure 7).

The building became the Eureka Theatre in the 1920s and 1930s when first silent films and then "talkies" were shown. Fred Bartine owned the building at that time, followed by the current owners, the Pastorino family. The last movie was shown in the late 1950s (Marjory Pastorino, personal communication, 7-13-85). Ads for local merchants painted in 1924 by the Twin City Scenic Company can still be seen on the stage screen. Tours of the inside are given by the owners for a nominal fee.

10. JACKSON HOUSE (HP&A Bldg. No. 31)

The Jackson House is a two-story brick hotel that was originally built in 1877 by Andrew Jackson (ECAR 1878; Ad in Eureka Daily Republican, January 24, 1878), a former lodging house

proprietor in Hamilton in the early 1870s (Langely 1871:356; Ad in Molinelli 1879:123). Earlier, Jacob Vanderleith had operated the Cosmopolitan Hotel in a frame building at this same location, but reopened his establishment on the corner of Bullion and Main streets in summer 1877 (Ads in Eureka Daily Republican, July 5, 1877, August 25, 1877; ECAR 1877:147). Although gutted in the August, 1880, blaze, the Jackson Hotel was rebuilt and operated into the 1890s (Eureka Daily Sentinel, August 18, 1880; Sanborn Maps 1886, 1890). By 1907, it was renamed the Brown Hotel under the proprietorship of Samuel T. Edwards (Sanborn Map 1907; Polk 1912:97). John B. Venturino ran the Brown Hotel in the 1940s (Nevada Telephone Directory 1949:16). In 1981, the establishment was restored as the Jackson House (Hoekenga 1983:19).

11. ST. JAMES EPISCOPAL CHURCH (HP&A Bldg. No. 77)

St. James Episcopal was Eureka's first stone church, completed on July 28, 1872, one year after the cornerstone was laid by Bishop Whitaker (Angel 1881:203-204). The building is constructed of local volcanic tuff that was quarried nearby (Figure 8). Services were regularly held until 1893 (Davis 1913:558-559), and by 1907, the church was closed (Sanborn Map 1907).

12. METHODIST CHURCH (Private Residence) (HP&A Bldg. No. 72)

The first Methodist Church in Eureka was built in 1875 on this corner by Rev. John G. Gray (Angel 1881:212). The structure was destroyed in the 1879 fire. A second frame church also burned the next year. The present stone building was completed and dedicated on April 17, 1881 (Angel 1881:212). However, by 1890

Figure 8. Sunday gathering in front of St. James Episcopal Church on Spring Street around 1900. The house on the left was razed some time between 1907 and 1941 (Nevada Historical Society, neg. no. 256).

the church was vacant, and Methodist services were held after the turn-of-the-century in the old Presbyterian Church on the west side of town (Sanborn Maps 1890, 1907). Hooper's Garage occupied the building during the 1920s (Al Biale interview, 7-13-85; 1924 ad on Eureka Theatre stage screen). Recently, the building has been rennovated as a private residence.

13. RYLAND BUILDING (Private Residence) (HP&A Bldg. No. 30)

Originally constructed in 1875 by Richard Ryland and known as the Ryland Building, the present two-story brick structure was rebuilt following the disasterous August, 1880, blaze (ECAR 1874:129, 1875:168; 1880:122; Eureka Daily Sentinel, August 18, 1880). The building contained offices and bedrooms, and even a restaurant in the 1870s and 1880s (Sanborn Map 1886). Attorney George Baker had an office in 1878 (Ad in Eureka Daily Republican, January 24, 1878), and People's Resturant occupied space here in 1880 (Ad in Eureka Daily Sentinel, November 21, 1880). In recent years, the building has been converted into a private residence.

Next door on the corner of Main and Bateman streets, which is now a vacant lot, Jack Perry ran the Court House Exchange Saloon in the 1880s (ECAR 1880:113; Sanborn Map 1886; Ad in Molinelli 1879:119). Perry was marshall of Virginia City during its wild days in the 1860s and a friend of Mark Twain (Watson 1964:149, 177). Miraculously, Perry's frame building survived both the 1879 and 1880 fires.

14. FOLEY-RICKARD-JOHNSON-REMINGTON BUILDING (vacant)
(HP&A Bldg. No. 28)

Although this vacant building is not much to look at now, it was originally an impressive two-story brick structure started in

Figure 9. The two story Rickard-Foley-Johnson-Remington Building and other buildings on the east side of Main below Bateman Street are shown about 1912 during a Fourth of July parade. The photo was taken from the second floor of the Courthouse looking northeast (Nevada Historical Society, neg. no. 63).

the fall of 1879 and completed in early 1880 by owners M. D. Foley and Richard Rickard (Eureka Daily Leader, December 31, 1879; ECAR 1880:128; Angel 1881:439). The Eureka Daily Leader on December 31, 1879, reported:

> This building is of brick, two stories in height and has a frontage on Main street of 51 1/2 feet, and runs back to Buel street, 100 feet. On the first floor there are three stores, and on the second a large Masonic and Odd Fellow's Hall and two suites of offices. Work was commenced on it November 3d, and it is rapidly approaching completion. Its cost, when completed, will be in the neighborhood of $28,000, and it will be one of the finest buildings in the town.

Previously, Abe Bateman had erected Eureka's first adobe house in this spot (Eureka Daily Leader, December 31, 1879; Angel 1881:439). The Remington, Johnson, and Company hardware store was located in the northern portion of the present building in the 1880s and 1890s (Ad in Molinelli 1879:124; McKenney 1886:880; Sanborn Maps 1886, 1890, 1907). A book and stationery store, saloon, and Wells Fargo Express Office used other portions of the first floor during this period; upstairs was the Masonic and Odd Fellows Hall and other offices as noted above. During the 1920s, groceries were sold in the old Remington store (Nevada Historical Society Photo No. 9). The original iron pillasters or columns and fire doors, manufactured by J. R. Sims, 123/125 Beale St., San Francisco, remain today on the Remington store. Unfortunately, the second story was demolished in 1983.

15. GOLD BAR (vacant) (HP&A Bldg. No. 27)

This brick building was constructed for the John A. Paxton and Company Bank after the April, 1879, fire destroyed an earlier bank structure (Eureka Daily Sentinel, April 20, 1879). John

Paxton had moved his banking business from Austin where he was listed in an 1871 directory (Langley 1871:345). In 1885, the Eureka County Bank under the direction of M. D. Foley, Daniel Myer, R. K. Morrison, B. Gilman, and W. E. Griffin assumed control of the Paxton and Company interests (Wren 1904:631; Ad in Eureka Tri-Weekly Standard, April 30, 1886). A Western Union Telegraph Office was added to the bank around 1890 (Sanborn Map 1890). The Eureka County Bank continued to serve the community after the turn-of-the-century and later was known as the Eureka Bank and Trust Company. By 1941, a store occupied the building (Sanborn Map 1941), and until recently, it was the Gold Bar. The three decorated iron columns which have been painted yellow are part of the original structure.

16. STEPHENSON'S VIDEO STORE (HP&A Bldg. No. 26)

In the late 1870s, Maupin and Cromer, followed by Rudolph Leuzinger, operated a hardware business at this location (Ad in Eureka Daily Republican, July 5, 1877, January 24, 1878). The present brick structure was erected by Leuzinger after the 1879 fire (ECAR 1879:99,1880:85). In September 1879, when the building was completed, Jacob Cohn moved the Workingman's Clothing Store here from the shop next door to the north and reopened as the Bazaar Clothing Store (Eureka Weekly Sentinel, August 30, 1879; Ads in Eureka Daily Leader, July 7, 1879, October 31, 1879). Leuzinger retained ownership of the building, however (ECAR 1880:85, 1881:82). Several years later it became the Bazar Clothing Emporium under proprietor D. Nathan (Ads in Eureka Daily Sentinel, January 13, 1881, September 23, 1884; Angel 1881:441). In the early 1900s, the Mau brothers, Ernest and William, sold

clothing, shoes, books and stationery (Sanborn Map 1907; Polk 1912:97). Otto R. Mau had acquired the store by the 1920s and ran it until his death in 1945 (1924 ad on Eureka Theatre stage screen; Al Biale, interview, 7-13-85; see photo in Winzeler and Peppin 1982:18). For several years after World War II, Truman's Department Store was located here (Nevada Telephone Directory 1949:16; Al Biale, interview, 7-13-85). The building now contains Stevenson's Video Store. Four original columns on the front were cast by the Columbia Foundry in San Francisco, and the three pairs of fire doors were made by J. R. Sims also of San Francisco.

17. TUMBLEWEED THEATER (HP&A Bldg. No. 129)

Although well-disguised by a modern stone and stucco front, the Tumbleweed Theater is a brick structure that was erected in 1880 by Bremankampf and Regli, owners of the City Brewery and Soda Works (ECAR 1881:19, McKenney 1882:637; Ad in Eureka Daily Sentinel, November 21, 1880). The brewery had the distinction of supplying the first beer in Eureka (Eureka Daily Leader, December 31, 1879; Angel 1881:439). Between 1890 and 1907, a barber shop occupied the north half of the building along with the saloon (Sanborn Map 1890, 1907). The building later served as the Bank Club Bar in the 1920s and 1930s (Gladys Goeicoechea, personal communication, 7-12-85) and was Bay's Fountain from about 1945 to the 1960s (Maxine Rebaleati, personal communication, 6-27-85).

18. OWL CLUB CAFE

Hermann Vorberg's building, a two-story frame structure, was located here in the 1870s (ECAR 1880:151). Vorberg ran the C. P. Brewery downstairs, and upstairs was the Palace Saloon operated by

Luther Clark (Ads in Molinelli 1879:119; Eureka Daily Leader, July 7, 1879; Eureka Daily Sentinel, August 18, 1880). A one-story saloon replaced the building after the 1880 fire. By 1886, Reinhold Sadler, who later became governor, had acquired the building (ECAR 1886:136). This location continued to serve as a saloon in later years (Sanborn Map 1886, 1890, 1907).

19. RINKY DINK ROLLER RINK (HP&A Bldg. No. 25)

Joseph Mendes operated the notorious Tiger Saloon here in the late 1870s and 1880s. On separate occasions in 1880, gunfights at the saloon resulted in the deaths of two men (Eureka Daily Leader, December 31, 1880). After the August, 1880, blaze, the saloon was rebuilt as a two-story frame structure only 13 days. The saloon and dance hall continued to operate into the 1890s (Sanborn Map 1886, 1890). The building was razed around the turn-of-the-century (Sanborn Map 1907). In 1930, Mike Etchegaray built the present two-story concrete structure which was used as a handball court (Al Biale, interview, 7-13-85) and dance hall (Sanborn Map 1941).

20. NEVADA CLUB (HP&A Bldg. No. 24)

Beneath the new brick and metal exterior, the Nevada Club is a brick building that was constructed in 1880 or 1881 by Joseph Tognini and Company (ECAR 1881:138). Their earlier frame structure on this lot was destroyed on March 15, 1880, in a small fire that also claimed Schneider's drug store and Gregovich's restaurant to the north (Eureka Daily Leader, March 16, 1880). Tognini's saloon and H. Kayser's San Francisco Clothing Store occupied the building at the time. Kayser subsequently moved several doors up the street (Ad in Eureka Daily Sentinel, August

18, 1880). No sooner had the new saloon been completed, when it was consumed by the conflagration in August of 1880 (Eureka Daily Sentinel, August 18, 1880). It was then rebuilt as the present brick structure. Since that time, the place has almost always served as a saloon (Sanborn Map 1886, 1890, 1907). In the 1940s and 1950s, Pete Laborde ran the Nevada Club. Today, it is owned by Jim Dotson. The bar inside came from the small mining town of Union south of Carlin (Biale 1983:152).

21. RAINE'S MARKET (HP&A Bldg. No. 22, 23)

Two historical brick buildings comprise what is now Raine's Market. The northern portion was built in 1879 by W. J. Smith and Company as a saloon (ECAR 1879:161). H. Kayser reopened The San Francisco Clothing Store here in the spring of 1880 after the Tognini building burned earlier in March and was fortunate to survive the August fire (Ad and article in Eureka Daily Sentinel, August 18, 1880). Wholesale liquors were sold in the building in 1886 by W. J. Tonkin (Sanborn Map 1886; ECAR 1886; McKenney 1886:881). Several years later it was once again a saloon and also had a small shop selling mens' clothing (Sanborn Map 1890). Later, the building contained a notions store (Sanborn Map 1907). The Eureka Drug and Fountain operated a resturant and soda fountain during the 1940s, until Raine's Market expanded their store (Nevada Historical Society Photo No. 26; Sanborn Map 1941).

The southern half of Raine's Market was known as the Bishop and Chamblin Building, after its owners, when this brick structure was completed in June, 1880 (ECAR 1880:23; Eureka Daily Leader, June 3, 1880, p. 3). Their earlier frame structure,

occupied by F. J. Schneider's drugstore and Spiro Gregovich's restaurant, burned on March 16, 1880 (Eureka Daily Sentinel, March 16, 1880). However, the new brick building did survive the fire of August, 1880 (Eureka Daily Sentinel, August 18, 1880; Angel 1881:441). F. J. Schneider moved back into the new building after it was completed and maintained his drugstore for a number of years afterward (Eureka Daily Leader, June 3, 1880; Ad in Eureka Daily Sentinel, August 18, 1880; McKenney 1882:640, 1886:880). Brown, Tassel and Company, a boot and shoe outfit, moved into the other store in the building at the same time (Eureka Daily Leader, June 3, 1880). Later, a saloon in 1886 and an assay office in 1890 occupied this part of the building (Sanborn Maps 1886, 1890). Mrs. H. M. Schneider ran the drug store in the 1910s (Polk 1912:98; Sanborn Map 1907). Kitchen Brothers Market was located here in the 1940s and 1950s (Nevada Historical Society Photo No. 26; Nevada Telephone Directory 1949:16). Although the exterior has been modified, a historical pressed tin ceiling, now painted white with gold trim, is visible inside the building above the cash registers.

22. FIRST INTERSTATE BANK (HP&A Bldg. No. 21)

Where the bank stands today, Ham and Hunter established Eureka's first livery stable in the early 1870s (Langley 1871:352; Eureka Daily Leader, December 31, 1879; Angel 1881:439). George Thatcher built a stone building on this corner for a saloon prior to 1873 (ECAR 1873:141). It was advertised as "The Corner! The Largest and Finest Saloon in the State" in 1878 (Eureka Daily Republican, January 22, 1878). The saloon was acquired by Charles Lautenschlager in 1879, who promptly tore it down; he had nearly

completed a new brewery when the building was destroyed in the fire of April, 1879 (Eureka Daily Leader, April 19, 1879, p. 3; Eureka Daily Sentinel, April 20, 1879). Lautenschlager erected the present stone building by October of that year (Eureka Daily Sentinel, April 20, 1879; Eureka Daily Leader, December 31, 1879). A native of Germany who came to Eureka County in 1871, Lautenschlager ran a saloon here in the 1880s which featured beer from his Eureka Brewery (Angel 1881:669; McKenney 1882:639, 1886:880; Ad in Eureka Tri-Weekly Standard, April 30, 1886; Sanborn Map 1886). In the rear of the building, Ballich and Company had the Old Corner Chop House during this time (McKenney 1886:878; Sanborn Map 1886).

Around 1912, Joseph Lani and Benjamin Repetto were operating the saloon and Eureka Brewery (Polk 1912:97; Sanborn Map 1907). By 1924, the Farmers and Merchants National Bank occupied the building (1924 ad on Eureka Theatre stage screen) and was one of the few banks in the United States to remain open during the Depression (Al Biale, interview, 7-13-85). It later became a branch of the First National Bank of Nevada and, in 1981, First Interstate Bank. Volcanic tuff blocks used in the original construction can be seen along Clark Street.

23. MASONIC BUILDING (HP&A Bldg. No. 13)

During the late 1870s, James Whitton's American Exchange Building stood on this corner. Advertisements in 1877 indicate that stores and offices in the building were occupied by a tailor, an attorney, and a resturant among others (Ads in Eureka Daily Republican, July 5, 1877, July 6, 1877). The frame structure

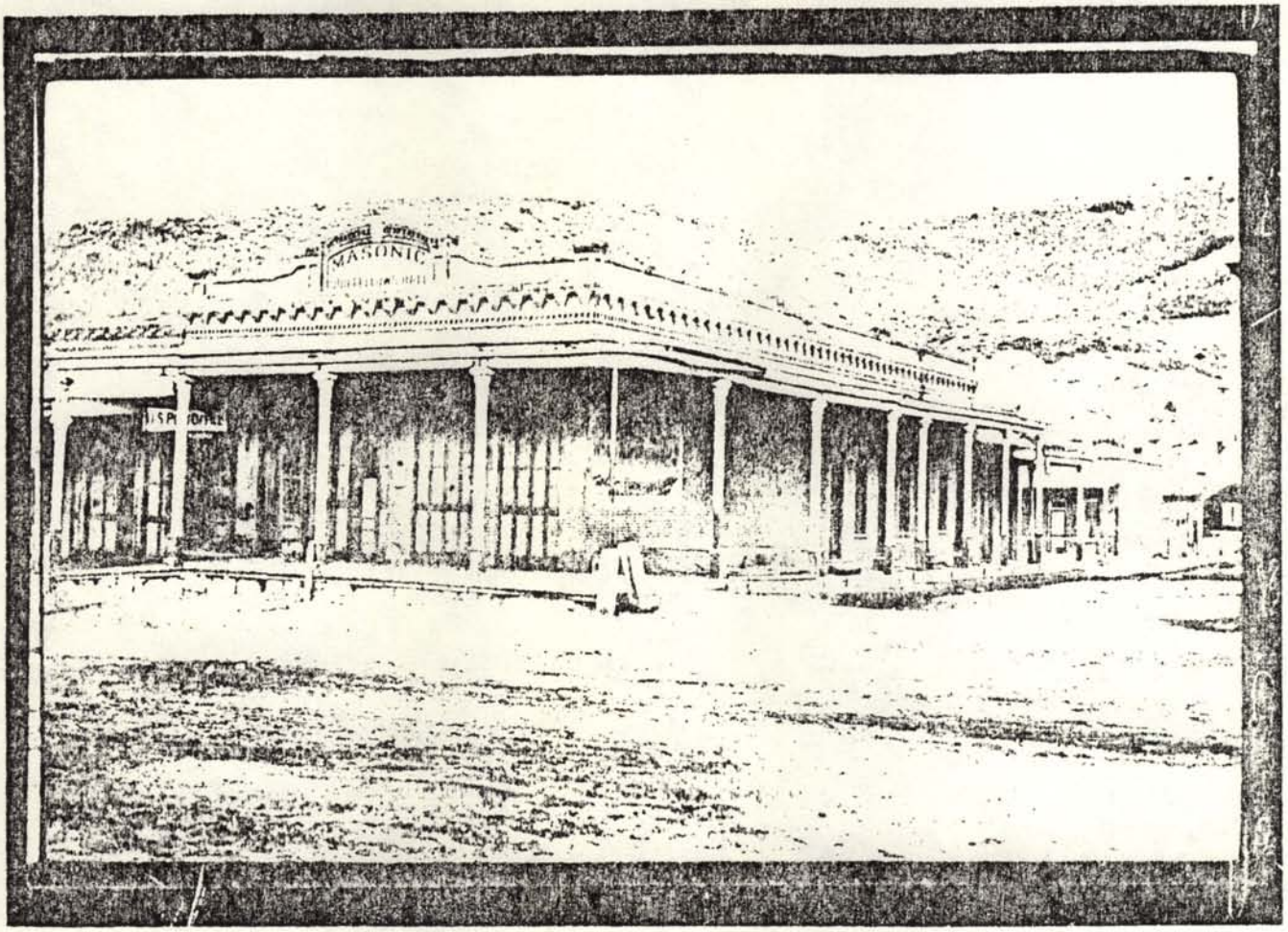

Figure 10. Masonic Building on the northeast corner of Main and Clark streets around 1916. The Eureka post office occupied part of the building then. Notice the Maher and Manion dry goods sign on the wall from the 1880s which is visible even today (Nevada Historical Society, neg. no. 51).

burned in the August 1880 fire, and Whitton erected the present brick building (Eureka Daily Sentinel, August 18, 1880; ECAR 1880:155; 1881:149). In the mid-1880s, the building contained the dry goods store of Maher and Manion, Edward Wilhelm's jewerly store, Casey's barber shop and bath house, M. Levy's tailor shop, and George Gavin's tinsmith shop on the corner of Buel and Clark streets (Eureka Daily Leader, December 31, 1880, p. 3; Ads in Eureka Daily Sentinel, August 24, 1884, September 23, 1884; McKenney 1882:638-639; Sanborn Map 1886). The Maher and Manion sign from that time is still partially visible today on the wall facing Clark Street.

In 1907, the Eureka Post Office occupied the northern portion of the building while the other shops were vacant (Sanborn Map 1907). The Masons and Odd Fellows began holding meetings here around this time (Nevada Historical Society Photo No. 51, dated 1916; Figure 10). Today, the Masons still use the basement downstairs for meetings.

The two brick buildings next door to the north (HP&A Bldg. No. 11, 12) were also built soon after the 1880 blaze (ECAR 1881:10, 73). In the 1880s, a grocery store owned by Hiram Johnson and a post office under Postmaster W. J. Smith, as well as Smith and Moser's bookstore, were located in the building now occupied by Atlas Precious Metals (Sanborn Map 1886; Ads in Eureka Daily Republican, January 22, 1878; Eureka Daily Sentinel, April 11, 1884; Eureka Tri-Weekly Standard, April 5, 1886; McKenney 1882:639-640, 1886:880). The vacant building with three fire doors was in the 1880s Brown and Godfrey's Oyster Saloon, Chop House, and Confectionery which was open twenty-four hours and the

only candy manufacturer in Eureka (Ad in Eureka Daily Sentinel, September 23, 1884; Sanborn Map 1886).

24. AL'S HARDWARE (HP&A Bldg. No. 5)

A portion of this stone building was built prior to 1873 by James Whitton and served as a storehouse (ECAR 1873:155, 1874:167, 1875:214, 1876:220, 1877:50). It was purchased from Whitton by Ferdinando Bonetti in 1877 (ECAR 1877:150). Bonetti and Gabriel Morgantini owned and operated the Stone Saloon here in the late 1870s and early 1880s (ECAR 1878:17, 1879, 1880:13). At first, the structure was two stories high, but was reduced to the present one-story after it burned in the fires of 1879 and 1880 (see Figure 11; Eureka Daily Sentinel, April 20, 1879, August 18, 1880; Al Biale, interview, 7-13-85). Following Bonetti's death in 1882, his wife, Louisa Bonetti, ran a boarding house and Morgantini continued to run the saloon. In 1903, John Biale, Louisa Bonetti's son-in-law, opened the Eureka Cash Store in the building (Figure 12). It operated until 1946, when Albert Biale started the hardware store that has continued to the present and is currently run by Jerry White, Al's son-in-law (Al Biale, interview, 7-13-85; Jerry White, personal communication, 7-13-85). Thus, Al's Hardware is the only family-owned store in Eureka that has continuously operated since the 1870s.

25. SITE OF EUREKA CONSOLIDATED SMELTER

In summer 1870, Colonel David E. Buel and Issac C. Bateman, for whom Buel and Bateman streets were named, built two furnaces at this location for smelting ores from the Champion and Buckeye mines (Molinelli 1879:16). Bateman was also president of the

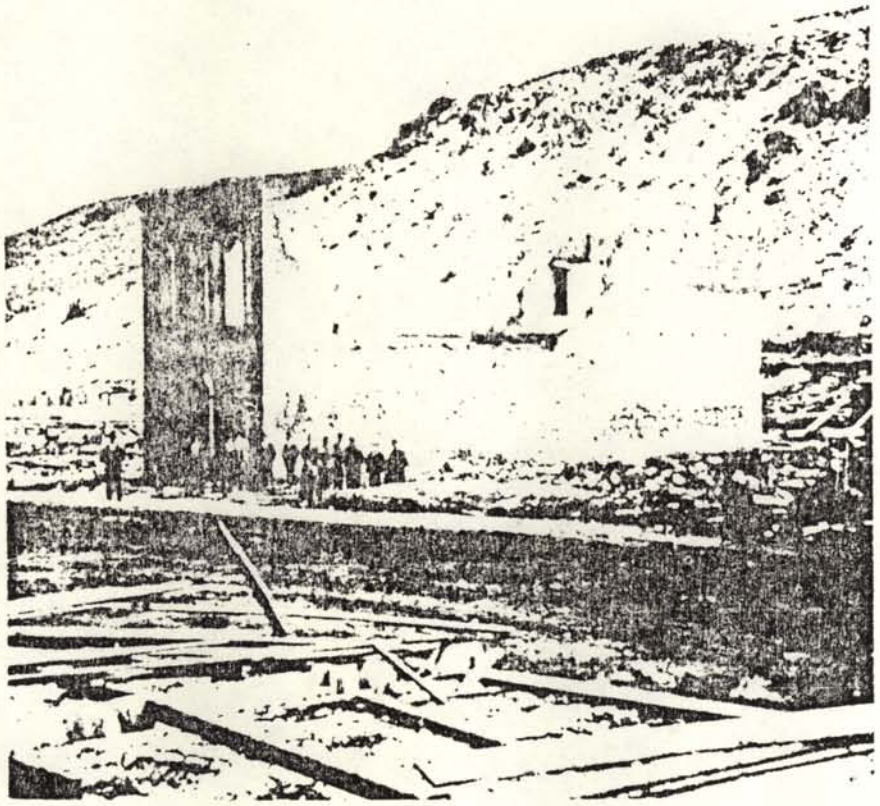

Figure 11. Ruins of Bonetti and Morgantini's Stone Saloon on north Main Street taken soon after the disasterous April 19, 1879 fire. The first story of the building is now Al's Hardware. The original photo was a stereographic view which was taken by Eureka photographer Louis Monaco (Albert F. Biale collection, courtesy of the Historical Society of Eureka).

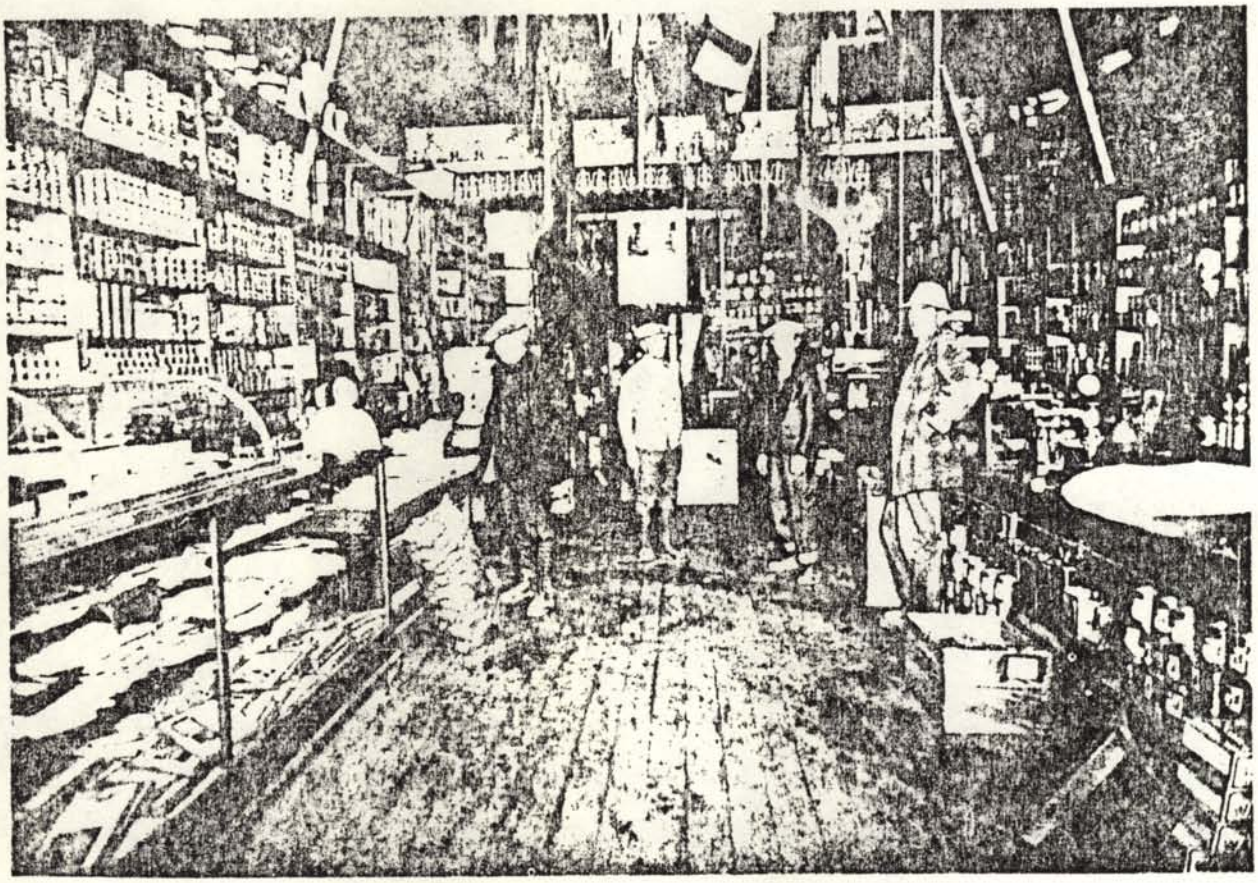

Figure 12. Interior of the Eureka Cash Store on north Main Street in 1926, now Al's Hardware. From left to right, Clotilde Biale, Clarence Johnson, John B. Biale, Albert F. Biale, and Fred Bartine (Albert F. Biale collection, courtesy of the Historical Society of Eureka).

Austin City Water Works at the time (Langley 1871:344). The Eureka Consolidated Mining Company later purchased the furnaces along with these mines and erected three other furnaces at this site. The Eureka Consolidated furnaces had a combined capacity of 300 tons daily in 1879 (Figure 13).

The Eureka Consolidated and other furnaces in town had two major environmental effects. First, poisonous fumes from smelting the silver-lead ores created deadly health problems for the residents. These fumes tended to hang over Eureka, which gave rise to the town's title "Pittsburg of the West" as early as 1871 (Reichman 1967:69). The problem was somewhat alleviated when the Eureka and Richmond smelters piped the fumes to smoke stacks on the hillsides above their operations in order to release it into the air at a higher level. The ditch for the Eureka Consolidated smoke stack can still be seen on the slope in this area. Second, large quanities of charcoal were required to fuel the furnaces. Each ton of ore smelted required twenty-five to thirty-five bushels of charcoal. In just 1880 alone, an estimated 1.25 million bushels of charcoal were burned (Young and Budy 1979:117). Thus, the mountains around Eureka as far as thirty miles away were stripped of pinyon and juniper trees which were reduced to charcoal by Italian woodcutters and charcoal burners.

The furnace product or base bullion from the Eureka Consolidated smelter was shipped by rail to the Pattinson Reduction Works in Newark, New Jersey, and then after 1877, to San Francisco for refining (Eureka Daily Leader, December 31, 1879). One source estimated that $16,250,00 worth of bullion had been processed by the close of 1879 (Eureka Daily Leader, December 31,

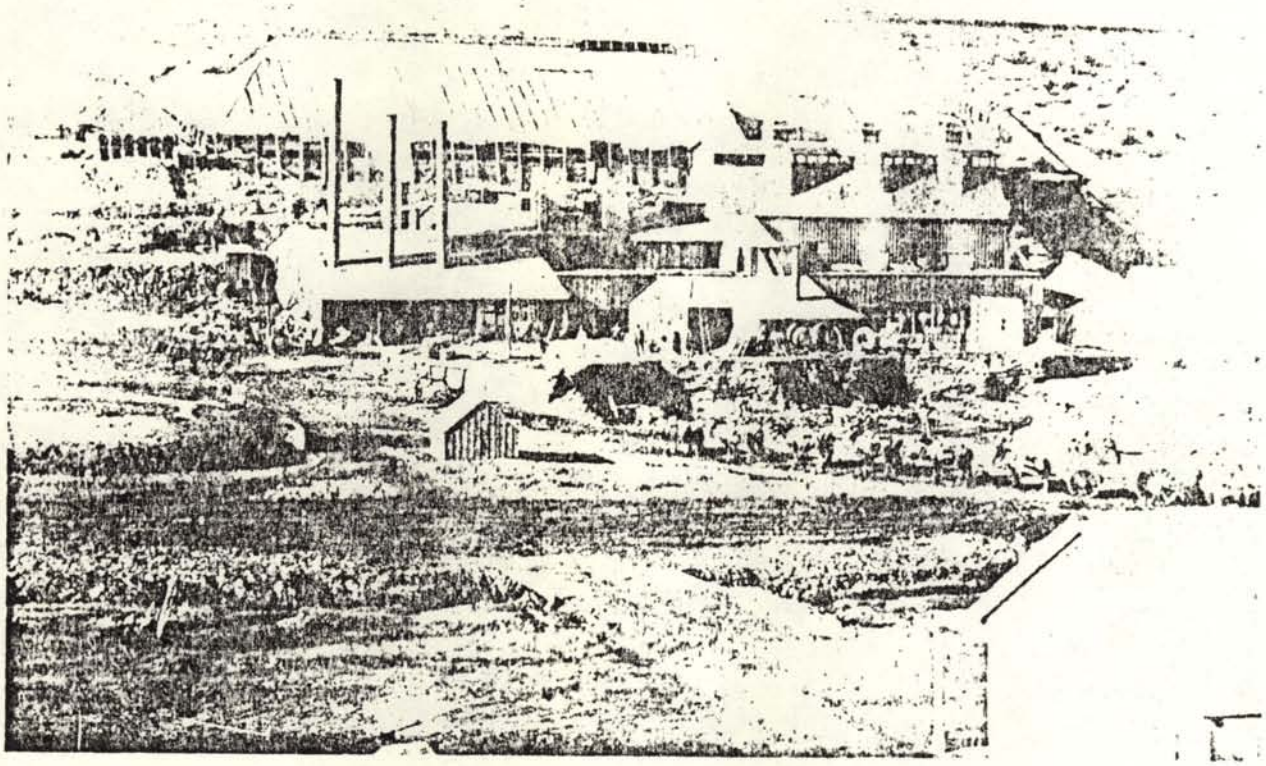

Figure 13. The Eureka Consolidated smelter at the north end of town in the 1870s or 1880s. U. S. Highway 50 is now located about where the furnaces were. Only slag piles remain at the site (Nevada Historical Society, neg. no. 79).

1979). The Eureka Consolidated also constructed a narrow gauge railroad to transport ores from their mines at Ruby Hill to the smelter, a distance of about three miles. Soon after its completion in 1875, the Ruby Hill Railroad was purchased by the Eureka and Palisade Railroad (Eureka Daily Leader, December 31, 1879; Molinelli 1879:16-17, 26; Myrick 1962:91). In 1891, the Eureka Consolidated smelter ceased operations. Today, only piles of slag and pieces of metal remain.

26. HISTORICAL TOGNINI AND COMPANY BUILDING (HP&A Bldg. No. 8)

Tognini and Company erected this brick building in 1877 (ECAR 1877:142) after owning a canvas and frame building in this same lot in earlier years (ECAR 1875:196, 1876:201, 1877:142). This Swiss-Italian company, which included Joseph Tognini, Ferdinando Bonetti, and Gabriel Zanoli, operated the Eureka Billiard Hall Saloon in the late 1870s and 1880s (Sanborn Map 1886; Ad in Eureka Tri-Weekly Standard, April 30, 1886; Al Biale, interview, 6-28-85). As with many other Italians in Eureka at the time, the company was involved in charcoal production; it also was one of the largest of these companies. In 1880, the company was assessed for owning a total of 31,000 bushels of charcoal valued at $2,080, 1,500 cords of wood at $1,600, 100 cords of cedar (juniper) wood at $200, fourteen horses and mules at $950, another three horses and one mule at $200, three wagons at $450, and another one at $25 (ECAR 1880:144). In addition, Tognini and Company owned seven 160 acre parcels of timber land in the Antelope Mining District located five to seven miles northeast of Chimney Station on the Eureka and Palisade Railroad. Today, the brick building has been

painted a cream color and is used for storage. Note the star plates and rods on the side for holding the walls together.

The building attached to the north (HP&A Bldg. No. 7) was built in 1924 by John Biale. The front bricks are the same as those used for the school built on Adam Street about the same time, and other portions contain bricks salvaged from the Pinto Mill that was located several miles southeast of town (Al Biale, interview, 6-28-85). Notice the "Trupak Peaches" sign from the 1930s painted on the north side of the building. This location is also the site of Eureka's first business establishment. In June of 1869, the Pioneer Resturant, which consisted of a canvas tent, was opened here by John S. Capron for boarding the men at W. W. McCoy's nearby furnace (Eureka Daily Leader, December 31, 1879; Molinelli 1879:22; Angel 1881:439). In the original townsite survey by Monroe, this area was referred to as the Furnace Block, after McCoy's furnace which was located to the north near the corner of Robbins and Main streets. Later in the 1880s, Joseph Vanina's store was located in this spot next door to the Tognini and Company Building (ECAR 1880:151; Angel 1881:439). Vanina was also involved heavily in the charcoal business, whose assets in charcoal, cords of wood, horses, mules, and wagons exceeded that of Tognini and Company (ECAR 1881:151).

Another note of historical importance in this area concerns the brick building just up to street to the north which has a "Castorlube Motor Oil" sign painted on the side (HP&A Bldg. No. 3). Originally two stories high, the structure was erected about 1879 by another Italian company under Celso Tatti and served as a saloon (ECAR 1878:168, 1879:167, 1880:143; misspelled as Colso

Tatti in Shepperson 1969:24 and Celso Tolli in Earl 1969:57, 1979:118 and Winzeler and Peppin 1982:16). It was in Tatti's saloon that about 500 Italian carbonari or charcoal burners formed the Eureka Coalburners Protective Association on July 6, 1879, which figured prominently in the Charcoal Burners War (Eureka Daily Leader, July 7, 1879; Reichman 1967:48; Grazeola 1969:35; Earl 1969, 1979).

27. ALPINE LODGE AND LOUIE'S LOUNGE (HP&A Bldg. No. 133,143,144)

While the buildings that extend from Louie's Lounge to the Alpine Lodge Bar on the corner have been modified extensively or rebuilt, this portion of Main Street has a long history of businesses. Myers and Franklin, two Jewish dry goods merchants (Stern 1982), erected the stone building now occupied by Louie's Lounge in 1874 (ECAR 1873:93; 1874:99). Cesare Rossetti acquired the building in 1876 and still owned it in 1886 when books were sold in the front and lodgings were let in the rear (ECAR 1876:168, 1886; Sanborn Map 1886). In the 1930s and early 1940s, the building served as a Works Progress Administration sewing room (Al Biale, interview, 7-13-85; Sanborn Map 1941). Locally quarried tuff blocks from the original construction are visible in the alley along the north wall.

Next door to the south, Oberfelder and Harrison, two other Jewish merchants, built this stone and brick structure in 1873 or earlier and sold general merchandise (ECAR 1873:102; Langley 1871:352; Stern 1982:96). Earlier, Harrison and another Jewish partner, Solomon Nathan, had opened Eureka's first store in the Tannehill log cabin (Eureka Daily Leader, December 31, 1879; Angel

1881:439). In 1875, Reinhold Sadler and Company bought out Oberfelder and Harrison and continued to operate a general store here into the 1880s (ECAR 1875:178, 1880:137; Sanborn Map 1886; Ad in Eureka Daily Sentinel, August 18, 1880).

The next building up the street was built by Isidore Baron as a store prior to 1873 (ECAR 1873:16, 1874:14). Between 1875 and 1880, David Manheim owned and operated a clothing store in the building (ECAR 1875:129, 1877:87; 1878:109; 1879:116; 1880:94). By 1886, a general store occupied the building (Sanborn Map 1886).

Where the Alpine Lodge is located, a two story frame building existed in the 1880s. A dry goods store was downstairs, while upstairs was the San Francisco Lodging House under proprietors P. S. Quaid in 1882 and C. H. Blaser in 1886 (Sanborn Map 1886; McKenney 1882:639; Ad in Eureka Tri-Weekly Standard, August 6, 1886). A portion of the San Francisco Lodging House is shown in an 1880s photograph (Figure 1). Around 1890, William Zadow moved his butcher shop from a building next to the Eureka Opera House (currently the Eureka Post Office) to this location, a business which he operated here for well over twenty years (Polk 1912:98). His son Rudolf Zadow had a garage next door when the Lincoln Highway opened in 1915-1916 (Sanborn Map 1890, 1907; Al Biale, interview, 7-13-85). These buildings were torn down sometime before 1941 (Sanborn Map 1941), and the present building for the Alpine Lodge was constructed afterward.

The first story of the brick building on the corner of Clark and Main streets, now occupied by the Alpine Lodge Bar, may date from 1875. Jewish merchant O. Dunkel erected a brick structure here in that year for a clothing store which he operated in the

1870s and 1880s (ECAR 1875:44; 1880:37; Sanborn Map 1886). Offices and the American Lodging House run by Mrs. S. J. Dill in 1877 and later by Mrs. Dunkel were on the second floor (Ad in Eureka Daily Republican, July 5, 1877; McKenney 1882:638). The cosmopolitan nature of Eureka during that time period is shown in an ad for Dr. L. Bazet, a physician and surgeon in the building who advertized "Consultation in English, French, Spanish, and Italian" (Ad in Eureka Daily Republican, January 24, 1878). After the turn-of-the-century, Mrs. Fraser sold dry goods on the first floor (Sanborn Map 1907; Polk 1912:97; Al Biale, interview, 7-13-85). In 1941, the place was known as the Lincoln Hotel (Sanborn Map 1941; Al Biale, interview, 7-13-85).

28. EUREKA CAFE (HP&A Bldg. No. 44)

William H. Clark, for whom Clark Street was named, erected the northern half of this two-story stone building prior to 1873 (ECAR 1873:26). Locally quarried volcanic tuff from the original construction is visible on the north wall along Clark Street and on the second story. Clark ran a general merchandise and hardware store here in the 1870s (ECAR 1875:31, 1878:35; Ad in Molinelli 1879:121). Upstairs were offices for doctors, dentists, and attorneys, including the office of Thomas Wren, a notable attorney and Nevada legislator (Ads in Eureka Daily Republican, January 24, 1878; Eureka Tri-Weekly Standard, April 30, 1886; McKenney 1882:640). F. W. Clute acquired the general store in late 1879 and continued to operate it in the 1880s, although Clark's widow retained ownership of the building (Ad in Eureka Daily Leader, October 31, 1879; McKenney 1882:637; ECAR 1886; Sanborn Map 1886).

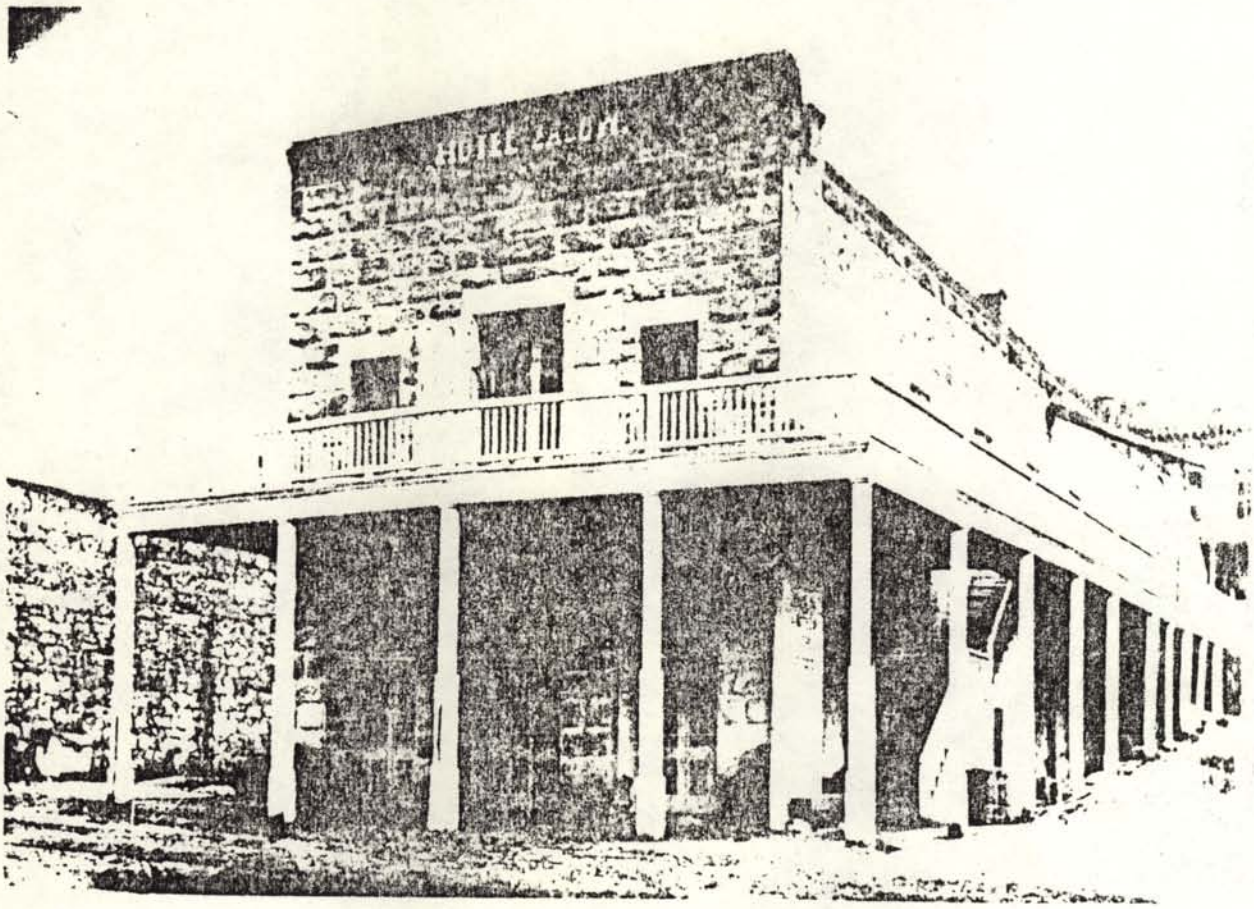

Figure 14. The Hotel Zadow on the southwest corner of Main and Clark streets sometime after 1900. By 1907, anaddition to the hotel was constructed next door on the left. The Eureka Cafe now occupies this building (Nevada Historical Society, neg. no. 32).

By 1907, the building had been coverted into the Zadow Hotel, owned by William Zadow and operated by A. T. Taylor (Sanborn Map 1907; Polk 1912:97-98; Figure 14). It was about this time that the south half of the building was added. As can be seen on the second floor, the stone work does not quite match the original northern half of the building. When the Lincoln Highway was opened in 1915-1916, rooms at the Zadow Hotel cost $2.50 per day under the American Plan (Ad in Lincoln Highway Association 1916:139), a real bargin at today's prices! In the 1920s, Ed Herrea acquired the property and changed the name to the Eureka Hotel (1924 ad on Eureka Theatre stage screen; Al Biale, interview, 7-13-85). Pete Laborde, one time owner of the Nevada Club, also owned this hotel in the 1930s (Al Biale, interview, 7-13-85).

29. JIM AND LORRAINE'S CAFE AND BAR (HP&A Bldg. No. 43)

This stone building of local volcanic tuff was built prior to 1873 by Solomon Ashim and his brother. The building served as a general store in the 1880s, and after the turn-of-the-century, dry goods were sold by Mrs. Flora Morris and her son David (Sanborn Maps 1886, 1890, 1907; Polk 1912:97; Estelle Gensoli, personal communication, 7-14-85). In the 1930s and early 40s, it was used as a County resturant (Sanborn Map 1941). The present owners, Jim and Lorraine Dotson, acquired the place in the early 1960s (Jim Dotson, personal communication, 6-19-85).

30. SITE OF PARKER HOUSE/OLD EUREKA GARAGE (HP&A Bldg. No. 145)

The Parker House was the first hotel and two-story frame building in Eureka. Originally the Overland Stage Station in Austin, it was moved to Eureka in the early 1870s by R. H. Parker

to a location opposite the Eureka Consolidated Smelter at the north end of town (Eureka Daily Leader, December 31, 1879; Angel 1881:439; Langley 1871:352). Eureka's first post office under Postmaster George S. Haskell was established in the building at that time. The Parker House was later moved to this location. J. L. Hinckley and J. H. Lockwood operated the hotel in the late 1870s (Ads in Eureka Daily Republican, January 24, 1878; Molinelli 1879:116), and Knight and McNicol ran the establishment in the 1880s (McKenney 1882:639). In 1882, the Parker House Resturant advertised: "Table supplied with the best in the market. Oldest established house in Eureka. Board, per week, $8.00. Single meals, 50 ct." (McKenney 1882:644). Unfortunately, the Parker House was destroyed along with several other buildings downtown on September 22, 1884, when a fire started in the kitchen (Eureka Daily Sentinel, September 23, 1884; Reichman 1967:75).

Over the years, the location of the Parker House was forgotten. The Eureka Sentinel even published an article on October 14, 1972, asking for any information regarding the location of this historic hotel. But from historical research, we now know it stood in this place. Like the Parker House, the present building, the old Eureka Garage, was moved to this location from elsewhere in town. A portion of the garage was originally built on the corner of Buel and Bateman by W. H. Russell about 1914. Russell later moved it here where he ran the Eureka Garage in the 1930s (Al Biale, interview, 7-13-85; Sanborn Map 1941; Nevada Historical Society Photo No. 14).

31. COLONADE HOTEL (HP&A Bldg. No. 56)

William H. Clark had this two-story brick building erected in 1880 prior to his death in November of that year (ECAR 1880:24, 1881:24; Eureka Daily Leader, December 31, 1880). Frank Abadie, a real estate agent in town, acquired the property by 1886 when it was operated as the Colonade Hotel (Sanborn Map 1886; ECAR 1886; McKenney 1886:878). The Italian Benevolent Society held their meetings here at the time. By 1890 and in the early 20th century, the building stood vacant (Sanborn Maps 1890, 1907). In the 1940s or earlier, the Colonade Hotel was again open for business (Sanborn Map 1941; Nevada Telephone Directory 1949:16).

32. HISTORICAL SADLER HOME (Residence) (HP&A Bldg. No. 91)

Reinhold Sadler, a well-known Eureka businessman and Nevada Governor from 1896 to 1902, built this two-story brick house in 1879 (ECAR 1878:157, 1879:153-154). The house has been modified on several occasions since its original construction (Sanborn Maps 1886, 1890, 1907, 1941), as can be seen by comparing the 1880s photograph shown in Figure 15 with the house today. Among his various business ventures, Sadler and Company ran a general merchandise store on Main Street next to present-day Louie's Lounge (McKenney 1882:645, 1886:880). It is rumored that a tunnel connected the Sadler Home with the store.

The red brick house (HP&A Bldg. No. 61) up the street on the corner across from the Colonade Hotel also dates from the same period. It was constructed in 1880 by M. R. Chamberlin, and shortly thereafter was owned by attorney Thomas Wren (ECAR 1880:23; 1886). Wren later wrote the History of the State of Nevada, published in 1904.

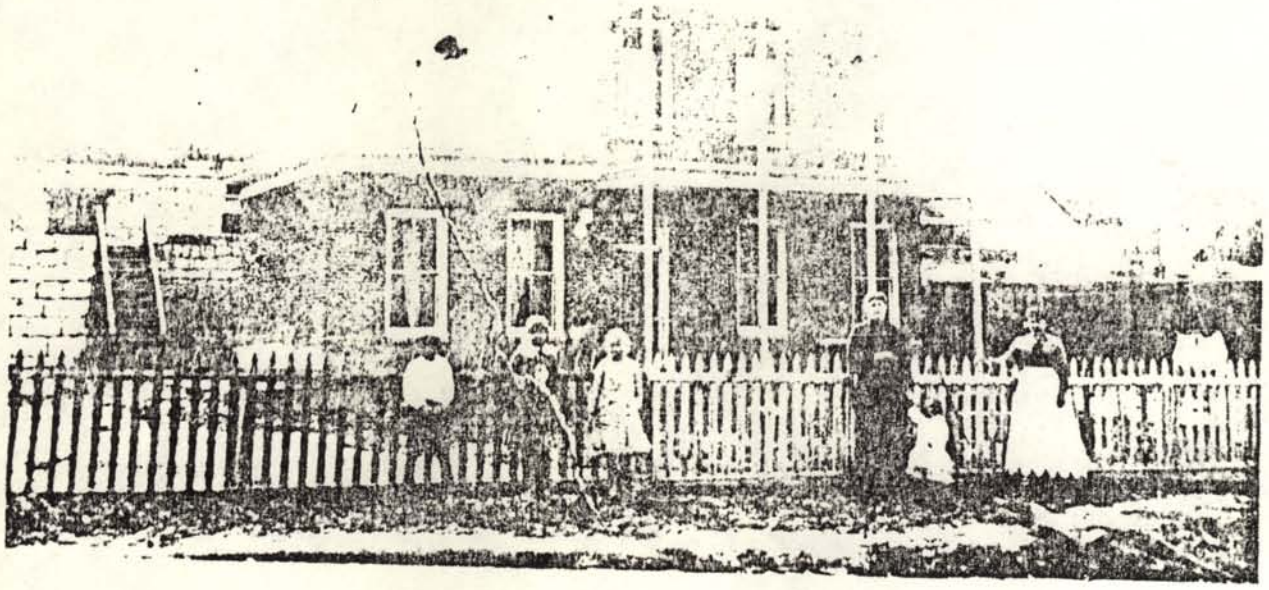

Figure 15. The Sadler home on Monroe Street around the turn-of-the-century (Nevada Historical Society, neg. no. 44).

33. OLD PRESBYTERIAN CHURCH (HP&A Bldg. No. 95)

The Presbyterian Church organized in Eureka in August 1873 and built this frame structure soon afterwards (Whitehill 1877:51; Angel 1881:216). The congregation dwindled considerably by the turn-of-the-century (Wren 1904:203; Davis 1913:584), so that by about 1907, the building was taken over by the Methodist Church (Sanborn Map 1907). It again served as a Presbyterian Church in later years (Sanborn Map 1941), and today is the Eureka Bible Church. The bell from the church now stands adjacent to the Eureka County Museum.

34. NOB HILL FIREHOUSE (HP&A Bldg. No. 138)

During its heyday in the 1870s and 1880s, Eureka boasted five fire hose companies stationed in various parts of the town. These consisted of the Eureka Hook and Ladder on the southeast corner of Spring and Clark streets, the Rescue on Monroe Street near the Sentinel Building, the Knickerbocker, the Richmond, and the Nob Hill at this location (Eureka Daily Sentinel, May 13, 1879; Angel 1881:440; Reichman 1967:74). Each hose cart carried 500 feet of carbolized hose (Sanborn Maps 1886, 1890).

This small wooden building served as the Nob Hill hose cart house for many years (Sanborn Maps 1886, 1890, 1907, 1941). Ironically, the firehouse partially burned in the September 22, 1884, fire which destroyed the Parker House and other adjacent buildings along Main Street (Eureka Daily Sentinel, September 23, 1884). The present building was undoubtedly constructed from the remains of the earlier firehouse. After the 1900s, a bell tower

stood aside the building which was removed sometime after 1941 (Sanborn Maps 1907, 1941).

35. ST. BRENDAN'S CATHOLIC CHURCH (HP&A Bldg. No. 100)

Father D. Monteverde erected the first Roman Catholic Church at this location in 1871. In 1874, the frame building was replaced with the existing stone church at a cost of $5,000 (Whitehill 1877:51; Angel 1881:205). The gray volcanic tuff used for this impressive structure came from the Chandler Quarry above the west side of town.

Eureka's first two-story brick school was located on the south side of the Church where Ryland Street now exists. The building was constructed in 1879 and was torn down in the late 1930s (Eureka Daily Leader, December 31, 1879; Al Biale, interview, 6-28-85).

36. HISTORICAL ZADOW AND MORRISON HOME (HP&A Bldg. No. 58)

Located on the corner of Edwards and Galena streets above the south end of town, this Victorian frame house was erected by James Wilson about 1886 (ECAR 1886:156). Around 1890, William Zadow who owned a butcher shop on Main Street and later the Zadow Hotel, bought the house (ECAR 1890:169; Figure 16). The Zadow family lived here until about 1910 when Dan Morrison purchased it (ECAR 1910:96). The Morrison family owned the house for many years afterward (ECAR 1915:21, 1921, 1927, 1933).

37. GENERAL STORE (HP&A Bldg. No. 14)

This two-story brick building was constructed in 1882 by James Allen as the Ottawa Hotel to replace his earlier frame structure (Ad in Eureka Daily Republican, January 22, 1878; ECAR 1880:3, 1881:4, 1882:4). In 1886, Hiram Johnson who operated a

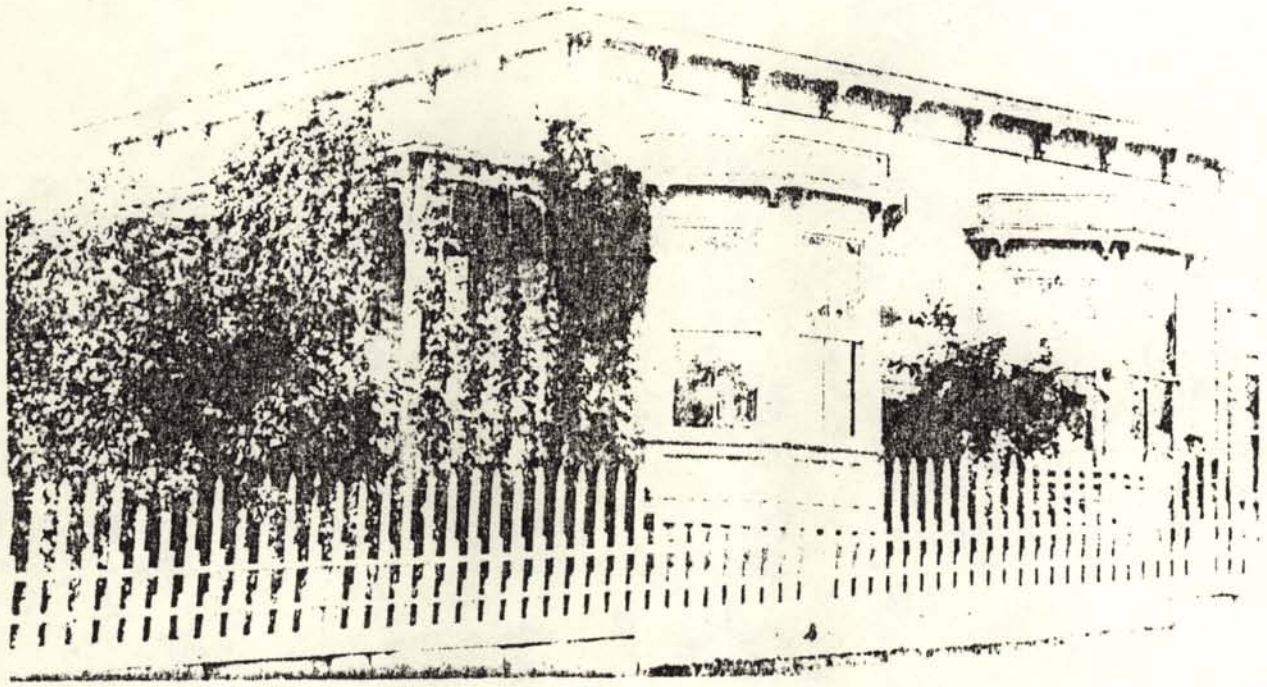

Figure 16. The Zadow/Morrison residence on the corner of Edwards and Galena streets about 1900 (Nevada Historical Society, neg. no. 49).

grocery store on north Main Street owned the building. It later served as The Richmond Service, a Shell Oil Company gas station in the 1920s, and a Union 76 station in the late 1940s (Nevada Historical Society Photo No. 22).

38. SITE OF RICHMOND CONSOLIDATED SMELTER

The slag piles and ruins at the south end of town are all that remain of the Richmond Consolidated smelter and refinery (Figure 17). Ogden, Dunne, and Company constructed the first furnace at this site in 1871 to run ores from the Richmond Mine. Later that year, the furnace and Richmond mine were purchased by the Richmond Consolidated Mining Company (limited), a London based organization, for $1,100,000 (Eureka Daily Leader, December 31, 1879). Two other furnaces were soon built, followed in 1875, by three hydrocycles or water jacket furnaces. Fire destroyed the company's entire works in September 1878 which were then replaced by four hydrocycle furnaces with a total daily capacity of 300 tons. Beginning in 1874, the company refined its own base bullion, rather than shipping it to New York for processing as in earlier years. Although accounts of production figures vary, the Eureka Daily Leader reported on December 31, 1879, that the Richmond Consolidated produced in the 1870s a total of 42,402 tons of bullion valued at nearly $13,500,000 in gold and silver and about $3,500,000 in lead. In 1890, the Richmond smelter ceased operations, and soon after the turn-of-the-century it was dismantled. The ditch for the smoke stack is still visible on the slope above.

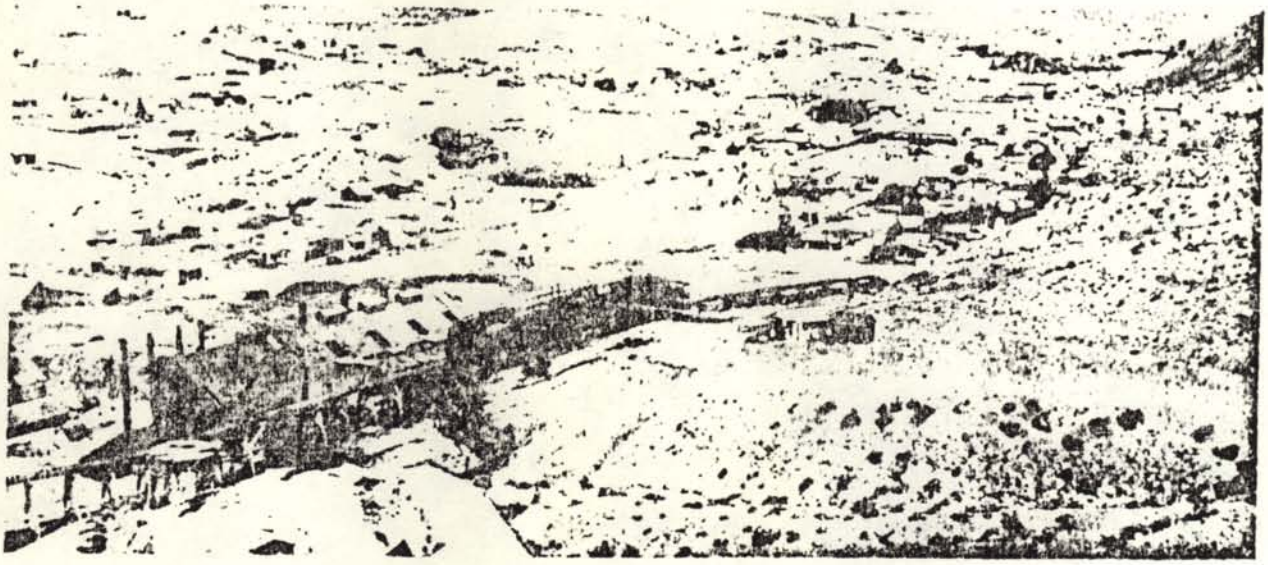

Figure 17. View of Eureka in the 1880s or 1890s from the south end of town overlooking the Richmond Consolidated smelter (Nevada Historical Society, neg. no. 253).

39. TANNEHILL LOG CABIN (HP&A Bldg. No. 120)

This log cabin is believed to be Eureka's first house, built in 1865 by the Tannehill Company, a prospecting party who established the Eureka District the previous year. The cabin also served as the first store in Eureka, operated by Nathan and Harrison. As of 1879, the structure was located above the K. K. Consolidated furnace (a.k.a. Silver West) adjacent to Richard Rickard's residence, superintendent of the Richmond Consolidated (Eureka Daily Leader, December 31, 1879; Angel 1881:439). The K. K. or Silver West furnace site was at the south end of town in this vicinity (Eureka County Assessor's Map 1971). The massive logs used for the cabin are limber pine which were obtained at higher elevations around Eureka. Inside, the ceiling is composed of pinyon and juniper logs. Portions of the cabin have been modified since its original construction.

40. CEMETERIES

Five cemeteries are located on the west side of town in Graveyard Flat, also known as Death Valley in the 1880s (Hague 1883:Map Sheet VIII). The cemeteries are reached by driving westward past the courthouse up Ruby Hill Road (see Map 1). From north to south, the cemeteries are the Odd Fellows, County, City, Masonic, and Catholic. In the 1870s and 1880s, the County cemetery was privately owned by C. W. Schwamb, an undertaker in town who had an office on Bateman above the Sentinel Office (McKenney 1882:640, 644; Al Biale, interview, 6-28-85). Most of these cemeteries are still in use today. Eureka also had Chinese and Jewish cemeteries, but little remains at either due to vandalism and destruction.

SUMMARY OF THE HISTORICAL BUILDINGS

On the basis of primarily the Sanborn maps and the Eureka County Assessor's Records, it was possible to determine when 109 of the 145 historical structures recorded during the building inventory were constructed. These data are shown in Table 1. The results indicate that 85 buildings or 78% of the ones for which dates could be determined were constructed in 1886 or earlier. Of these, at least 70 buildings or about 64% date from 1881 or earlier, and more than likely, most of those in the 1886 category could be included as well.

The major reason for the high number of buildings erected around 1880-1881 is due to the destructive fires of April, 1879, and August, 1880, which destroyed most structures in the northeastern portion of town. In contrast, little construction occurred between 1886 and 1907 during the declining years when the mines and smelters ceased operations. Only eight of 109 structures, a mere 7%, were built at this time. In the years between 1907 and 1941, 16 new buildings were erected.

Table 1. Distribution of Construction Dates for the Eureka Historical Buildings.

Date Built	N	%
1873 or earlier	6	.05
1874	3	.02
1875	3	.01
1876	-	-
1877	2	.01
1878	-	-
1879	8	.07
1880	16	.14
1881	3	.02
1881 or earlier	30	.27
1886 or earlier	15	.13
Subtotal	85	.78
1886-1890	3	.02
1890-1907	5	.04
1907-1941	16	.14
Total	109	

ARCHAEOLOGICAL RESOURCES OF THE EUREKA MINING DISTRICT

INTRODUCTION

Many human activities that have taken place in Eureka's past left behind a tangible print on the landscape. This "archaeological" record is a source of historical information that is independent of written accounts. As such, it is significant both in historical verification and as a way of acquiring information about the lives of people who are otherwise undocumented or poorly documented. Furthermore, the material remains of Eureka's past that are visible today are important symbols that evoke feelings of community esprit de corps and pride.

In this section the archaeological record of the Eureka Mining District is discussed within the framework of the Resource Protection and Planning Process(RP3) of the U.S. Department of Interior(HCRS 1980). The RP3 approach is a management model that has been used in other historic mining districts in Nevada(e.g., Hardesty and Firby 1980; Hardesty and Hattori 1982). In this model the first step is to review existing literature and records of, in this case, the mining district. From this review is constructed an historical framework within which past human activities have taken place. The historical framework is used to identify distinctive patterns of human behavior in time or space, such as periods of time separated by rapid cultural change or geographical areas demarcated by landscape features(e.g., river valleys, mountain basins). Such

time periods or geographical areas are then used as "study units" by the RP3 management model. The key human activities within each study unit are then evaluated to determine what archaeological and historical properties are most likely to be left behind and where they are most likely to be located. Models built from a review of historical accounts of the activities are most often used for this purpose. The models can then be checked and refined with a review of what is known about archaeological and historical properties existing today in the study area. Finally, recommendations for managing the sites in each study unit are made, including suggestions for immediate and long-term preservation.

STUDY UNITS IN THE EUREKA MINING DISTRICT

In the Eureka Mining District three historic time periods are recognized from the existing literature as being associated with distinctive patterns of human behavior. The first is the Pre-Bonanza Period. Beginning in 1859 when Captain James Simpson passed through Eureka Canyon, the period includes the first mining strike in 1864 at the Eureka mine in New York Canyon. The period ends in the year 1869 when these ores were successfully smelted and bonanza deposits at Ruby Hill were located. Human occupation of the Eureka Mining District during the Pre-Bonanza Period had several key characteristics. The carriers of American civilization made significant inroads into the region for the first time but their population was small in size. Molinelli(1879: 13), for example, notes that the town of Eureka has

less than 100 inhabitants in October of 1869, and it is likely that most of the district resided in this small mining camp. Mining activity in the district was mostly limited to prospecting and exploration rather than development. Furthermore, most of the activity was in New York Canyon and the Prospect Mountain area. Until 1869, virtually no milling was done in the district, largely due to the intractable ores; the ore that could be milled by existing methods was sent to Austin.

The second study unit in the Eureka Mining District is the Bonanza Period, beginning in late 1869 and ending in 1891. During this period, the district was revolutionized by metallurgical innovations, a bonanza strike at Ruby Hill, construction of a railroad, urbanism, and extensive capitalization. The district entered an explosive period of growth during this time. Urban settlements emerged at Eureka and nearby Ruby Hill, along with a few other small mining camps(e.g., Vanderbilt) in the hinterland. Eureka, for example, reached a peak population of about 6,000 or 7,000 by the late 1870s and had such urban amenities as an opera house, five fire companies, two militia companies, several fraternal orders, hotels, churches, a new courthouse, two newspapers, and a large water works(Molinelli 1879: 13-14). Several large smelters were built in the town of Eureka on the heels of the succcessful innovations in this milling technology in 1869, one of the largest of which - the Richmond - was capitalized by British companies. International capitalization was responsible as well for the development of the vast bonanza deposits at the Ruby Hill mines. The largest amount of mining activity took place in this

locality during the Bonanza Period, although other places in the district were mined. During the same period, a vast transportation network emerged around the construction of the Eureka and Palisade narrow gauge railroad in 1875 and its branch line, the Eureka and Ruby Hill. The Bonanza Period came to an end in the late 1880s, as the bonanza ores at Ruby Hill were exhausted; the terminus came with the closing of the two largest smelters in Eureka in 1890 and 1891.

The last study unit is the Post-Bonanza Period. Beginning in 1891 and lasting until the present, this period is marked by a dramatic decline in the intensity of mining and milling in the district, a rapid drop in population size and urbanism, and a disintegration of the transportation network. The old bonanza mines at Ruby Hill and at four other major localities in the district were reworked to recover low grade ores. Deep exploration of the mines took place, along with numerous attempts to solve major mining problems such as flooding. Smelting as a milling process was replaced during this period with flotation and cyanide leaching. Most of the old mining settlements were either abandoned(e.g., Ruby Hill) or greatly reduced in size(e.g., Eureka); however, the nucleated pattern of settlement in the district apparently continues, with relatively few dispersed and isolated households. The railroad system disintegrates.

KEY HUMAN ACTIVITIES

Within the three study units defined for the Eureka Mining District are several several dominant or key human activities patterning the archaeological record. They include mining, milling, settlement,

transportation, and charcoal making. Each of these can be modeled from historical accounts to give some idea of the pattern of behavior involved, the kinds of archaeological sites that each is likely to leave behind, and where such sites are most likely to be located.

MINING

In 1864 a party of prospectors from Austin(including W.O. Arnold, W.R. Tannehill, G.J. Tannehill, I.W. Stotts, and Moses Wilson) located a gold and silver bearing ledge in what is now called New York Canyon in a northeastern spur of Prospect Mountain(Molinelli 1879: 11-12). The Eureka mine, as the claim was called, yielded gold and silver as a lead compound that could not be reduced with then available milling technologies; consequently, the property was not immediately developed. Other ore bodies were located in the eastern slope of Prospect Mountain during the next few years but were left in the same state of limbo because of the intractable ore. In 1869 three events took place that created a bonanza in the Eureka Mining District(Vanderberg 1938: 8-9). First, the White Pine "excitement" created by a rich silver discovery at nearby Treasure Hill brought large numbers of miners into the area, many of whom began to explore in the Eureka Mining District. Secondly, late in the fall of this year an innovation in smelting technology made it possible to reduce the lead ores, allowing

development of the Prospect Mountain mines. And, lastly, rich ore deposits of the same kind were struck in the western and northwestern foothills of Prospect Mountain(Molinelli 1879: 18-19). The Ruby Hill mines were the most productive. In 1870 these mines were purchased by a group of San Francisco capitalists and incorporated as the Eureka Consolidated Mining Company. London capitalists incorporated as the Richmond Mining Company made further strikes at Ruby Hill in 1871(Angel 1881: 432). The high grade ores of the Ruby Hill mines were mostly depleted by 1885(Lincoln 1923: 89; Nolan 1962; Roberts et al 1967: 77). In part this was due to the presence of water at deeper levels, which at first required expensive pumping and finally turned out to be a technologically insurmountable obstacle. Between 1890 and 1912, the old bonanza mines were reworked to recover waste rock that had been used to fill the stopes and to remove the low-grade ore surrounding the bonanza ore bodies(Schilling 1982: 5). The ore was sent to smelters in the Salt Lake City area. Perhaps the major effort was by the Richmond-Eureka Mining Company, which gained control of the properties owned by the old Eureka and Richmond companies in 1905. The mines were worked until 1910 when a flood washed out 11 miles of track of the Eureka and Palisade Railroad and production has more or less ceased by 1912(Nolan 1962: 3; Roberts et al 1967: 77). After 1912 mining in the district was sporadic but based upon the discovery of new ore bodies and ore pockets missed earlier. The most significant periods of mining and exploration were started in 1919 by the Ruby Hill Development Company, in 1923 by the

Richmond-Eureka Company, and in 1937 by the Eureka Corporation, Ltd.(Nolan 1962: 3). Some new mines have been opened. The most important of these is the Fad in the Ruby Hill area, and the T.L. shaft in the Adams Hill area. In 1948 the Fad was flooded and efforts continued until the present to pump out and reopen the mine.

The significance of the Eureka Mining District mines comes mostly from their productivity and from their early development. Mining methods were basically the same as those developed on the Comstock; however, Nolan(1962: 53) observes that the district did develop some innovative new methods of geochemical and geophysical prospecting, including the use of rotary drills for deep testing, and new techniques for pumping large amounts of water from the mines. Furthermore, the district was among the first to use the "tribute" or "leasing" system of mining, apparently developed in Cornwall(Nolan 1962: 54). Milling technology, however, was Eureka's claim to fame.

What Site Types are Expected?

Mining in the Eureka Mining District created a set of archaeological sites originating in (1) the transportation of miners, tools, and materials between the ground surface and the ore body, and (2) mining the ore body. The sites are both surface and underground. Such a "mining pattern" includes several key activities that are recognizable archaeologically as activity loci. The first locus is surface mining, which includes prospects and open pits formed by above ground excavation of ore outcrops. Ingalls(1907: 1051, 1052, 1056) indicates that surface mining was especially

prevalent on the western side of Ruby Hill. Another locus in the mining pattern is underground mining. Associated archaeological sites include the artifacts and features left from the activities of stoping, mine access, mine ventilation, and transport between the ground surface and the underground mine workings. Hardesty and Hattori(1982) provide a historical model of underground mining for the nearby Cortez Mining District that is applicable to Eureka. The third mining locus is hoisting, ventilation, and pumping. All of these activities make use of tools and labor mostly centered in about the same place - mine entrances - and often in the same buildings. In 1937, for example, Vanderburg(1938: 41-43) observed that the working mines in the district had surface equipment and buildings related to hoisting, air ventilation, blacksmithing, and administration. The Silver Conner mine on Prospect Ridge, for example, had an Ingersoll-Rand air compressor driven by a 60-horsepower Fairbanks-Morse gasoline engine and a blacksmith shop. And the Eureka Prospect had two Ingersoll-Rand air compressors driven by a 240-horsepower diesel engine, two air-operated hoists, a blacksmith shop, an assay office, and camp buildings, along with a 50-ton cyanide mill. Associated artifacts and features include such things as air compressors, engines, water pumps, steam boilers, building foundations, cables, hoisting drums, cages, ore cars, and heavy construction timbers. Perhaps the most visible locus of the mining pattern are the waste rock dumps. Usually placed just outside the main mine entrances, the dumps are often associated with the remnants of ore transport systems such as tramways and ore cars.

Another mining locus is residential sites. Unlike the Eureka mills, which were situated in town, many of the mines were far enough away from settlements to encourage the formation of separate residential facilities. The town of Ruby Hill grew up in this way; however, the most common residential sites around the Eureka mines were boarding houses(see, for example, Ingalls 1907: 1054) and isolated cabins. Finally, the mining pattern included a locus of special purpose buildings, such as blacksmithing, offices, and storage. As at the mills, these buildings were usually placed in and around the mine entrances.

Where do Mining Sites Occur?

The archaeological record of mining activities in the Eureka Mining District is largely structured by geology, an observation that is consistent with other mining districts(Hardesty and Firby 1980; Rodman 1985). Ores in the district apparently originated in a large igneous mass that underlies Prospect Ridge; ore-bearing solutions from the mass were channeled into the fissures created by normal faulting(Nolan 1962: 2). Ore bodies were mineralized on the walls of the faults as replacements in a limestone or dolomite matrix. The ore bodies are irregularly distributed in the matrix, rather than in simple continuous veins; accordingly, mining laws for the district were changed in 1869 to provide for 100-feet square claims with vertical boundaries rather than rectangular claims with boundaries that sloped to follow veins(Schilling 1982: 3-4). Most bonanza mines in the district were situated along what is now known

as the Ruby Hill fault, which runs in a northeastern to southwestern direction starting on the western slope of Prospect Mountain and continuing across Ruby Hill to Adams Hill. Furthermore, nearly all of the mines were in an approximately two-mile wide strip.

The most productive geographical areas were Ruby Hill, Adams Hill, the Prospect Ridge belt, lower New York Canyon, and the Dunderberg-Windfall belts in the Hamburg Ridge area(Nolan 1962: 63-71). These areas, therefore, are expected to have the most abundant and significant archaeological record of mining activities in the district. The Adams Hill group of mines was productive as early as 1871; however, the greatest production has been in the 20th century(Nolan 1962: 63). Most of the ore has come from the Holly and the T.L. shaft, both opened relatively recently. As mentioned above, the Ruby Hill mines were by far the most productive during the bonanza period from 1869 to 1891; the peak production year was 1878(Nolan 1962: 65). The most important mines at Ruby Hill were the Eureka Consolidated, the Richmond, the K.K., the Phoenix, the Jackson, and the Albion. Most of the mines in the Prospect Ridge group did not become productive until the 1880s, well after the peak production of the Ruby Hill mines(Nolan 1962: 67). The most important mine was the Diamond-Excelsior, with peak years in the 1890s but with production continuing to the present (ibid.). Slightly after the development of the Ruby Hill group, the Dunderberg-Windfall group made its appearance. The earliest activity is recorded from 1870 to 1873 but the peak production years were from the late 1870s to the early 1880s(Nolan 1962: 70). Three mines

were most important: the Dunderberg, the Atlas, and the Hamburg. The area was not worked in the 1890s and the first years of the 20th century; in 1904, however, the Windfall mine was started and its development continued until 1916(ibid). Other significant mining activity continued in the area until 1923. Lower New York Canyon is most significant as the site of the original discovery of the Eureka Mining District ores rather than for its productivity. Some production from now unknown mines was reported as early as 1867 but the most important mine in the group was the Seventy Six mine, with peak years from 1881 to 1892(Nolan 1962: 71). Finally, outside of these five areas are a few other mines that have been reasonably productive at one time or another. The most important of these is the Hoosac mine. Situated on the southern summit of Hoosac Mountain, the mine was one of the earliest in the district and had peak years of production from 1872 to 1882(Nolan 1962: 71).

MILLING

Despite the discovery of rich ore bodies as early as 1864, the emergence of the Eureka Mining District as a significant producer had to wait for a technological innovation that would allow the lead-based ores to be reduced to bullion. The innovation took place in the fall of 1869. Major W.W. McCoy acquired a "cupola" blast furnace built a few months earlier by C.A.Stetefeldt for the Morris, Monroe and Company but operated unsuccessfully(Molinelli 1879: 15). McCoy made the furnace work by making two modifications: (1) a better quality sandstone lining from Pancake Mountain was installed;

and (2) the blast was increased by inserting two side tweers to replace the one tweer(tuyere) in the rear(ibid.). The furnace, constructed at the site of what was later Fisk's Barley Mill, was leased to D.E. Buel and I.C. Bateman who used it to smelt ore from the Ruby Hill mines until May, 1870. At this time, they built two new furnaces at the north end of the town of Eureka. Based upon McCoy's innovation, several other furnaces were erected later in 1869 and 1870, including the Robbins smelter, the Bevan and Wallace smelter, the Roslin Company smelter, the Ogden, Dunne, and Company smelter, and a few others(ibid., pages 16-17). By 1879, sixteen furnaces with daily capacities ranging from 40 to 60 tons of ore were operating in the district(ibid., page 25). The largest smelters were the Eureka Consolidated(with five furnaces) at the old Buel and Bateman site and the Richmond Company(with six furnaces) at the old Ogden, Dunne, and Company site at the south end of Eureka. Other major smelters included the Atlas(with two furnaces) and the Hoosac, K.K. Consolidated, and Matamoras, each with one furnace. Molinelli(1879: 25) mentions as well a 15-stamp amalgamation mill erected by Lemon Mining and Milling Company but which operated for only a few months. Vanderburg(1938: 43) also refers to the remains of an old roasting(chlordination) mill at the Geddes and Bertrand group in Secret Canyon, which operated mostly in the 1870s and 1880s.

The Eureka smelters were closed down within a few years after the bonanza ores of Ruby Hill were exhausted. In 1890 the Richmond smelter stopped operating, followed closely in 1891 by the Eureka

Con smelter. After this time, Eureka ores were shipped to the smelters in the vicinity of Salt Lake City. Some of the ores mined during the 20th century, however, were amenable to leaching. Accordingly, a few cyanide mills were built in the district. Vanderburg(1938: 42-45), for example, observed such mills during his 1937 survey at the Silver Conner mine, the Eureka Prospect mine, and the Windfall mine, all on Prospect Mountain.

The Eureka Mining District mills were significant historically not only for the large amount of precious metals and lead reduced by them but also because of their metallurgical innovations. Eureka was the site of "the first successful treatment in America of argentiferous lead ores"(Whitehill 1877: 52) and was, during the 1870s and 1880s, one of the world leaders in the production of lead and the silver-lead smelting industry(Vanderburg 1938: 33).

What Site Types are Expected?

The archaeological sites left by milling activities in the Eureka Mining District can be predicted in part by historical models of smelters. According to Vanderburg(1938: 33), blast furnaces patterned after the European Piltz and Raschette types were used. Molinelli(1879: 29-33) quotes a contemporary technical article describing the smelting process by John Porter, superintendent of the K.K. Mining Company. The physical plant is built on the hillside so that gravity can be used to move the ore through the various stages of treatment. Ore and fuel are transported to the top of the plant. Here, the ore is crushed and carried to the feeding floor,

where it is mixed with charcoal fuel for feeding into a furnace. For the ores from the Ruby Hill mines, a small proportion of quartz ore and slag are added as well. The charged ores are then conveyed to the furnaces. Having a height of 10 to 12 feet, the sandstone furnaces include a fuel hole for inserting the charge, tweer(tuyere) lines used for carrying air from blowers, and a sump at the bottom for receiving the molten ore. The molten ore in the sump is drawn off by means of an "automatic tap"(siphon tap), which is simply a basin at the front of the furnace connected to the lowest part of the sump by a canal. (According to Vanderberg(1938: 33), the siphon tap was invented in 1870 by Albert Arentz.) In the basin the molten ore separates into layers of materials with different specific gravities. Slag(mostly iron oxide and sand) is the topmost and is continually drawn off by a tap; the next lowest layer is spiese(arsenic of iron); and the lowest layer is the lead-gold-silver compound.

At most of the smelters, the lead-based bullion was then shipped to refineries outside the district to be separated into lead, silver, and gold. The Richmond Company , however, installed its own refining machinery in 1875. Molinelli(1879: 105-108) describes the equipment as follows. The crude bullion from the smelter was first purified in one of four calcining furnaces or pans. Impurities such as arsenic, antimony, zinc, and iron are skimmed off the surface and, after 24 hours, what remains is molded into four-ton circular blocks. A steam derrick is then used to lift the blocks into the melting pans of a crystalizing furnace, where they are once again

melted. Each of the four crystalizing furnaces at the Richmond plant had two large cast-iron melting pans and a single cast-iron crystalizing pan. After melting, the ore was channeled into the crystalizing pan. Here, the molten ore was subjected to steam from the bottom of the pan and cold water from the top, which solidified the lead and left the gold and silver as a liquid. The gold-silver compound is then separated by cupellation in ordinary reverberatory furnaces.

What are the archaeological implications of this model? A "Eureka milling pattern" can be recognized that includes the visible remnants of the key activitities taking place in the milling process. The first locus of the pattern is transportation, which includes the devices for bringing ore to the mill. In Eureka the most important means of ore transport was the Eureka and Ruby Hill Railraod, a spur line of the Eureka and Palisades. Some sections of the railroad grade remain. Another locus of the milling pattern is ore crushing. The machines and housing used for this activity are usually placed on the highest level of the mill complex, next to the transportation route. Virtually nothing remains of this locus at the Eureka mills with the exception of what may have been the ore crushing floor at the Richmond and Eureka Con. Perhaps the most important locus of the Eureka milling pattern is the smelter. This complex included the furnaces and associated equipment, such as air blowers, engines, and steam boilers. To the best of our knowledge, nothing remains of the early smelters today, although scattered equipment parts and furnace remains can still be observed at the

Richmond. In 1907, however, the furnace from the Matamoras mill, which stood just above the Eureka Con, still existed(Ingalls 1907: 1054, 1057-1058). Sandstone was used for the entire shaft, although most of the early furnaces apparently had an outer wall of porphyry or similar material and an inner lining of the sandstone. Starting in the mid-1870s, the sandstone was replaced in most furnaces by a water-jacket. The Matamoras furnace shaft had a square cross-section, at least up to the flue. On top of the furnace was a large inverted pyramid structure built of sheet iron lined with brick. The structure is a early style "dust catcher," used to collect dust from the ore charge; dust-collecting flues were installed at both the Richmond and Eureka Con smelters in 1873(Vanderberg 1938: 33). In the top of the dust catcher was a large hole about 18 inches in diameter through which gases passed, and steam was piped in at the bottom - apparently used to improve the draft. A Sturtevant fan(which provided the air blast) and its engine remained beside the furnace, alongside of boilers used to generate steam. None of this is visible in 1985.

The fourth locus in the Eureka milling pattern is the refinery. Apparently, the Richmond was the only smelter to have a refinery but by 1907 only a cupola furnace remained(Ingalls 1907: 1054, 1057). Smoke dispersion is the next locus in the pattern. The exhaust of gases from the smelters created such a problem in Eureka that large pipes were installed in ditches to carry smoke well up the mountain sides in the hope that it would be dispersed in the higher atmosphere. Today the smoke ditches from the Richmond plant are

still visible. The next locus in the Eureka milling pattern is waste products. Slag dumps are the most visible tangible by-product of the Eureka smelters existing today. Large slag dumps remain at the sites of both the Eureka Consolidated and Richmond plants and are expected archaeological features at other smelting sites in the district. Indeed Ingalls (1907: 1057) observed that by the beginning of the 20th century virtually nothing remained at any of the Eureka smelters except for the slag heaps. Finally, the last locus in the pattern is a complex of special purpose buildings, such as blacksmithing, office buildings, storage buildings, and the like. These buildings surrounded the "inner mill" complex of ore crushing, smelting, and refining, and some of their foundations are still visible.

Where Are Milling Sites Found?

All of the smelters were in the town of Eureka. Most of the smelters were clustered at either the upper end or the lower end of town, on the outskirts of the "inner city" of commercial and institutional buildings.

SETTLEMENTS

What archaeological record exists of the miners themselves is mostly limited to the settlements in the Eureka Mining District, especially the towns of Eureka and Ruby Hill and outlying camps such as Vanderbilt and the one at the Geddes and Bertrand mine in Secret Canyon. The remaining archaeological record of these settlements is an important source of information about the lives of people who are

otherwise poorly known, especially such ethnic groups as the immigrant Chinese and the Italian/Swiss charcoal burners. From written accounts and what is presently known about archaeological remains, the settlements in the Eureka Mining District can be classified into towns, smaller mining or charcoal burning camps, and scattered households.

Towns

Two town-size settlements existed in the Eureka Mining District. The town of Eureka was created by the technological/transportation innovations of 1869. The town grew up in a narrow valley with springs between projecting spurs of Prospect Mountain. During the winter of 1869-70, the settlement was limited to several log cabins and canvas tents(Molinelli 1879: 13). Much of Eureka's early growth came from houses moved from other places. The Eureka Daily Sentinel of July 23, 1870, for example, mentions 43 houses being moved into town in one week, including some from Elko and Carlin over 100 miles away(cited in Angel 1881: 434). As was true of most mining towns, Eureka did not grow according to a preconceived plan but rather haphazardly. At the same time, geographical and historical constraints imposed some order. The settlement was more or less confined to the linear north-south trending floor of a narrow valley with steep side walls; the transportation network was constrained in a similar manner, with roads running along the linear axis of the valley floor. Activities within the town of Eureka were constrained by the traditional pattern in the eastern and midwestern United States. The pattern includes an inner city of commercial and

institutional buildings surrounded in successive order by outer city zones of residences and industrial activities(see Bowers and Muessig 1982: 57). One possible determinant of residential patterning in the town of Eureka is ethnicity. Several ethnic groups lived in the settlement, including immigrant Chinese, Italians, and well over 100 people of Jewish faith(Eureka Daily Sentinel, April 17, 1879, page 3, column 3). At Virginia City in the Comstock Mining District, ethnic groups tended to live in distinct neighborhoods(Hardesty and Firby 1980), and the possibility that this was true for the town of Eureka should not be overlooked. The only good historical and archaeological evidence of such an ethnic neighborhood, however, is the area between Adams and Monroe Streets that extends from Bateman to Robbins Streets that was occupied by the Chinese community.

Visible archaeological sites in the town of Eureka today are limited but quite variable. Perhaps the most dominant are the large slag dumps and mill tailings in the inner city and covering much of the western residential area. The two large quarries at the eastern and western(the Chandler quarry) edges of the settlement are quite visible as well, from which tufa was cut to furnish materials for the churches and other buildings in Eureka. Existing stone buildings, along with adobe buildings, appear to be associated with the earliest settlement of Eureka(Angel 1881: 439). The archaeological evidence of Eureka's early settlement, however, is quite limited, in part because of a city ordinance requiring that trash be removed from the city(Eureka Daily Sentinel, January 1, 1874). What remains of the city trash dump is covered by the new

Eureka High School building. The brick buildings in Eureka apparently originated in the second period of construction in the 1870s. Many of these were built of materials manufactured at the Allen and Company kiln, which had its brickyard "south of the Ruby Hill road"(Eureka Daily Sentinel, June 25, 1879, page 2, column 2). Another kind of archaeological and historical site that exists in 1985 is the old corral at the intersection of Robbins Street and the ditch; the corral shows up on the 1886 Sanford fire insurance map of Eureka. Some of what appears to be the original fence still remains. Finally, several cemeteries not only still remain but are still used today. Of these, the Catholic, Masonic, and County cemeteries are the most visible. The Chinese Cemetery on the same flat but toward the high school has been virtually destroyed, and only a few gravestones remain in the Jewish Cemetery south of town near the old county hospital. Such cemeteries should be treated as archaeological sites containing demographic and biological information about otherwise poorly known mining populations that once lived in the Eureka Mining District.

Several unique historical events played an important role in the formation of the archaeological record of Eureka. Both fires and floods are included. Large fires occurred on April 19, 1879; August 17, 1880(Angel 1881: 440); and Sept. 22, 1884(Eureka Daily Sentinel). The first two fires burned major portions of the settlement but were mostly confined, because of prevailing winds, to the area east of Main Street and northward from the center of town. After each fire, major debris removal and rebuilding took place. For

this reason, it is unlikely that the northeastern part of Eureka contains much archaeological information about the earliest settlement; the exception would be in the vicinity of the stone and brick buildings that survived. Floods had an equally destructive impact upon the archaeological record. On July 24, 1874; July 24, 1876; and August 15, 1878, flash floods formed in the canyons above the town and roared through the inner city(Angel 1881: 441). Buildings, people, animals, and trash from the southern and upper end of the settlement were carried away and dumped at the lower end. The impact upon then existing archaeological patterns must have been dramatic. Because of the disruptive impacts of fires and floods, the northwestern part of Eureka is the most likely area to have a significant archaeological record of the town's pre-1880 settlement. At the same time, it must be remembered that milling activities were most intense throughout the inner city, also creating major disturbances in archaeological patterns.

The other town in the Eureka Mining District was Ruby Hill, established in 1874; today it exists only as an archaeological site. Situated on the flat two and one-half miles west of Eureka and just east of the Locan shaft, Ruby Hill had a population of about 2500 in the late 1870s. From advertisements in the Ruby Hill Mining News, the town at its peak included such businesses as drug stores, bakeries, saloons, restaurants, breweries, groceries, barbershops, dry goods, boots and shoes, boarding houses, and stage lines. Methodist and Catholic churches are mentioned, along with the Miner's Union Hall, post office, school house, and opera house;

Molinelli(1879: 20) also refers to a "Protestant Episcopal" church. The layout of the settlement was apparently similar to that of Eureka, with an inner city business district surrounded first by residences and then by the mines. No mills, however, are mentioned; the ore from the Ruby Hill mines was shipped to Eureka via the Eureka and Ruby Hill Railroad. Only one major fire was recorded at Ruby Hill, in November of 1881, and several buildings were burned; however, the fire does not seem to have been as destructive as the Eureka fires. No floods are mentioned.

Outlying Camps

Most of the population in the Eureka Mining District lived in the towns of Eureka and Ruby Hill; however, a few small nucleated settlements existed in the "hinterland" around these two towns. Most of these grew up around the outlying mines, especially in Secret Canyon on the southern slope of Prospect Mountain. Perhaps the largest was Vanderbilt. In 1870 this camp supposedly had "125 inhabitants, three stores, two boarding-houses, a post-office, and a blacksmith shop. For a time it had two daily lines of stages and one line continued in operation six months"(Angel 1881: 436). Declining shortly afterwards, the settlement was apparently reactivated in the early 1880s by the Geddes and Bertrand mines and had "five saloons"(Ruby Hill Mining News, November 7, 1881). Prospect was another mining camp in Secret Canyon, about which little is known. Finally, the 1880 federal population census suggests also that small camps of Italian or Swiss charcoal burners existed around the

Dunderberg and Hamburg mines in the Prospect Mountains, the north side of Ruby Hill, Secret Canyon, and Spring Valley, as well as in other places further away(such as the well-known Fish Creek Valley)(Bowers and Muessig 1982: 60-61). Undoubtedly the archaeological remains of other short-term camps are scattered throughout the pinyon-juniper forests in the Eureka Mining District.

Scattered Households

Archaeological or historical evidence suggests that little of the population lived in isolated households scattered over the district. At the same time, it is likely that a few such sites do exist. Angel(1881: 436), for example, implies that "about forty dwellings" are scattered in Spring Valley. Perhaps the most likely place would be in the vicinity of the mines and outlying mills but outside the nucleated camp settlements.

TRANSPORTATION

The pivot of mining, milling, and most other activities in the Eureka district was a transportation network. Prior to the discovery of gold and silver in 1864, the expansion of American civilization into the area rode on the heels of the pony express route and the overland stage system. The mining period brought with it new transportation demands. In the beginning ore was shipped from the Eureka mines by wagon to Austin, but initially these needs were minimal. The year 1869, however, ushered in a "transportation revolution." First of all, the ore strike at Ruby Hill and the development of a workable smelting process created a mining boom in

the district. Secondly, the transcontinental railroad was completed. The first event brought about the development of an elaborate transportation system within the district, including vertical transport in the mines and surface transport between the mines and the outside work. Ore flowed in one direction, labor and supplies in the other. Completion of the national railroad created a transportation network that linked the district with the outside world. The most important part of the system was the Eureka and Palisade Railroad, a narrow gauge system started in 1873 and completed in 1875(Goodwin 1966). According to Molinelli(1879: 13), the narrow gauge made Eureka "the depot of all transportation and freight and passenger traffic to the different mining camps lying south of it. It is now in regular stage communication with Austin, Belmont, Tybo, Ward District, Hamilton, and Pioche." Furthermore, a spur line built in the same year, the Eureka-Ruby Hill, greatly improved the transportation system within the district. The fortunes of the Eureka and Palisade were tied closely with the mining district. In 1900 the railroad declared bankruptcy but was revitalized and operated until 1910, when a flood washed out over 11 miles of track(Myrick 1962: 100-111). The line was reopened in 1912 as the Eureka-Nevada Railroad but was finally abandoned on September 21, 1938(ibid.).

Several overland roads existed as well, some of which were toll roads and some of which were public roads to be maintained by the county Supervisor of Roads(Eureka Daily Sentinel, May 28, 1874). The three major public roads were as follows: (1) from Eureka(Robbins

Street) northwest on road to Lookout shaft, then on to Spring Valley; (2) from Eureka(Bateman Street) to the Jackson Mine and then on to Ruby Hill; and (3) from Eureka(Main Street) south over the summit of Prospect Mountain to Pinto Mill. Another important road was the toll road between Eureka and Secret Canyon.

What Site Types are Expected?

The remaining archaeological record of Eureka's early transportation system is minimal. Perhaps the most visible is the grade of the Eureka and Palisade Railroad; although the steel rails were removed in 1938(Goodwin 1966), some of the wooden ties and bridges and major sections of the grade still exist. Remaining as well is the station house for Eureka at the north end of town near the Eureka Con mill site. Much of the grade of the Eureka and Ruby Hill spur line still exists as the bed for the present highway between Eureka and the Ruby Hill mines. Whether or not remnants of the old stage roads or associated toll houses remain is questionable; certainly a more detailed archaeological survey is needed.

CHARCOAL MAKING

The development of the smelting industry during the Bonanza Period created a demand for charcoal, the only existing fuel that could produce the high temperatures needed for smelting. For this reason, charcoal emerged as a significant activity in the Eureka Mining District; indeed, fully 12 percent of Eureka County was

listed as engaged in charcoal making by the federal population census of 1880(Bowers and Muessig 1982: 61). Most of these individuals were either Italian or Italian-Swiss immigrants. The importance of charcoal making to the Eureka mining industry is underlined by the so-called "Fish Creek War" of 1879, in which the Charcoal Burners Association went on strike to protest a reduction of the price paid to them by the mill owners(Angel 1881: 438; Earl 1969). By the late 1880s, however, the decline of the smelting industry brought about an end to charcoal making.

What Site Types are Expected?

Charcoal was manufactured by burning wood either in an earthen pit oven or in a stone or brick oven(Grazeola 1969; Murbarger 1965; Young and Budy 1979). Pit ovens are visible archaeologically as large circular or oval depressions surrounded by a ring of charcoal; the other type is a large beehive-shaped structure. There is some controversy about when and where they were constructed. Murbarger(1965), for example, sees this type as being chronologically the earliest and as being replaced by the beehive structures. On the other hand, Young and Budy(1979) argue that the two types are used to burn different kinds of wood - the pit ovens for pinyon pine, and beehive ovens for juniper or mountain mahogany, both of which require higher temperatures for conversion to charcoal. Bowers and Muessig(1982: 61) comment that only three beehive ovens are documented within the Eureka area.

Where are the Sites Found?

In general charcoal making sites are found within the

pinyon-juniper zone throughout the Eureka Mining District. If Young and Budy's(1979) interpretation is correct, there should be a difference in where the two site types are located; pit ovens should be associated with pinyon forests and beehive ovens with juniper or mountain mahogany forests. Bowers and Muessig(1982: 61) observe that the 1880 federal population census places clusters of charcoal burners in a relatively few localities - north Ruby Hill, around the Dunderberg and Hamburg mines, Secret Canyon, Spring Valley, Fish Creek Valley, the Williams Range, and Cedar Creek. It is in these areas that the archaeological evidence of charcoal making is expected to be greatest.

PRESERVATION THEMES

From the preceding discussion, it is clear that the "pool" of historic resources existing today in the Eureka Mining District are the traces of five key human activities that have taken place during three distinctive periods of time. How to best preserve the pool must be answered next. Four preservation themes are considered in this section as a way of acheiving this goal: (1) pattern and process; (2) unique historical events; (3) key research questions; and (4) symbolism. The first theme is directed at preserving the archaeological and historical traces of human behavioral processes. For preservation purposes, this theme is most closely related to the "representative type" criteria for evaluating historic properties for listing on the National Register of Historic Places. In the

Eureka Mining District the most important processes surround the key human activities of mining, milling, settlement, transportation, and charcoal making. Such processes are technological, demographic, or social. The archaeological patterns that have been formed from technological processes include the smelting of lead-silver ores, underground lode mining, railroad transportation systems, and charcoal making. Demographic processes are reflected in settlement patterns, cemeteries, and evidence of the age-sex structure of the mining populations. And the archaeological traces of social processes include the functional structure of communities, settlement formation, ethnicity, and household composition. What is apparent from the earlier discussion is that the processes whose archaeological patterns should be preserved are not the same for the three time periods or study units. In the Pre-Bonanza Period cultural resources originating in the processes of smelting, railroad transportation, settlement formation, and charcoal making are either absent or minimal. Nor was the process of <u>industrial</u> mining developed to any signficant extent; the early mines(such as the Eureka) in New York Canyon and the eastern Prospect Mountain area were largely undeveloped without the use of industrial technology, labor, organizations, or capitalization until after 1869. Furthermore, mining settlements during this period were no more than "domestic receptacles" for the miners . The small camps and isolated households that then existed were short-term, ephemeral entities that were not affected by processes out of which new settlement types evolved(see Bowers and Muessig 1982: 97-99, 108).

What processes are reflected in the archaeological record of the Pre-Bonanza Period? Mostly those related to prospecting. Change and variability in prospector households, for example, are created by demographic and social processes that could, at least in theory, be studied with the Pre-Bonanza Period archaeological record. The location and protection of any remaining household sites from this period is, therefore, desirable, pointing to the importance of an intensive survey of the Eureka Mining District. What remains of the Pre-Bonanza mining processes is expected to be exceedingly limited because of later mining activity at the same mines. It is possible, however, that some prospects, open mines, and scattered tools and structures from this early period can still be located. The archaeological record of Pre-Bonanza milling processes is probably non-existent. What ores could be reduced by then existing technology were shipped to the mills in Austin. Some experimentation with smelting ores was done in the Eureka Mining District. The earliest attempt, apparently, was made by Moses Wilson in 1866; however, the unsuccessful smelter was built on the same site as the later Roslin furnace in Eureka. Nothing is expected to remain from the Wilson site. Nor is anything expected to remain from the Stetefeldt-McCoy furnace, which was built in 1869 on the site of what was later Fisk's Barley Mill. And, finally, the G.C. Robbins furnace, the only other furnace to be constructed before 1870, was probably destroyed long ago by later smelters at the same site. Several furnaces were built in 1870 but this brings us into the Bonanza Period.

The Bonanza Period brought with it the revolutionary

technological, social, and demographic changes of industrialization. For this reason, Bonanza Period cultural resources represent processes that are quite different from the preceding period even though many of the same human activities took place. The key industrial processes that should be preserved include industrial mining, smelting, urbanism, railroad transportation, and charcoal making. Visible evidence of industrial mining between 1869 and 1891 is not expected to be abundant; the most productive mines were reworked time and time again, removing most of the archaeological record. Detailed archaeological surveys of the five major mining localities in the district, however, may locate features originating in this period that still exist and that should be protected. Such features are most likely to have survived in less productive mines that were not extensively reworked in the Post-Bonanza Period. Both surface and underground sites are expected to remain, including such industrial tools as engines, steam boilers, hoisting structures, water pumps, and ore transport systems. The archaeological record of industrial mining, however, should include as well distinctive patterns of social organization. For example, miners unions, such as the Ruby Hill Miners Union, were formed during the Bonanza Period in response to the takeover of the Eureka mines and mills by large corporations(Bowers and Muessig 1982: 99). And corporate industrialism created as well a much more inegalitarian social structure within the district. For this reason, the Bonanza Period is marked by great "wealth" differences between mine owners/managers and workers; archaeologically, domestic sites are expected to have

relatively large variation in domestic architecture and in other evidence of household wealth. Finally, industrial mining is associated with large company-owned boarding houses and cottages, something close to company towns, in the immediate environs of the major mines. Ingalls(1907: 1054), for example, published a photograph of the boarding house at the Eureka Consolidated mine on Ruby Hill. Any attempt to preserve the hard evidence of industrial mining today must take into account such social and demographic processes that revolutionized the structure of the mining frontier.

The distinctive urban settlements of the Bonanza Period were an extension of many of the same industrial processes, combined with urbanization. Unlike the earlier Pre-Bonanza Period, the town of Eureka cannot be understood simply as a receptacle for the domestic dwellings of miners. To a certain extent the same was true of nearby Ruby Hill. Both of these settlements were created by similar patterns of urban growth, in part brought about by the social differentiation processes of corporate industrialism, discussed above. Other social and demographic processes were involved, however. Some relatively segregated urban "neighborhoods," for example, were formed by intentional ethnic segregation; the Eureka "chinatown" is perhaps the best example. And, as discussed earlier, mining towns were typically not planned but still tended to grow along the lines of the ideal image of the how towns were laid out in the eastern and midwestern United States. Thus, both Eureka and Ruby Hill developed a distinctive "inner city" of commercial and institutional activities, surrounded by successive zones of

residences and mining/milling. Whether or not this pattern can be explained at least in part by economic processes should be considered. Preservation of the archaeological or historical patterns of these, or similar, urban processes that worked during the Bonanza Period should be included in any detailed management plan for the district.

Finally, both industrial milling and transportation networks are key processes that created the distinctive patterns of human behavior during the Bonanza Period. The importance of the industrial smelting process to the development of the Eureka district cannot be understated; yet it is clear that little visible remains that can be preserved. Beyond slag dumps and mill tailings, however, a few building foundations(especially at the Richmond mill), scattered parts of machinery, and smoke ditches can still be observed. These should be protected. Bonanza Period charcoal making is another process, howbeit something less than industrial, that should still be visible in the archaeological record and, in the case of the remaining beehive kilns, as historical structures. More detailed archaeological surveys are needed to locate what charcoal kilns still exist, along with residential sites of the Italian/Italian Swiss immigrants who worked in this occupation. The archaeological record of the Bonanza transportation networks is in much the same condition as the mills. Despite the importance of the Eureka and Palisade and the Eureka and Ruby Hill railroads, only the grade, some bridges, scattered ties, and the Eureka depot are visible. An intensive archaeological survey should be conducted to determine

what other evidence of the Bonanza transportation exists and an effort made to preserve what remains.

The Post-Bonanza Period is the most visible today but the least important historically. Urbanism disappears after the exhaustion of the bonanza ores and the close of the Eureka smelters; settlement processes revert to something like the Pre-Bonanza pattern of receptacles of domestic dwellings. The transportation pattern rapidly disintegrated with the collapse of the urban/industrial system in the late 1880s and early 1890s. Early in the Post-Bonanza Period, however, industrial milling was reestablished in the district with a new technology, at new sites, and on a much smaller scale. Smelters were replaced with cyanide flotation mills, as this new technology was developed. And the cyanide mills were built close to the mines that were reworked rather than in Eureka. Mining during the Post-Bonanza Period was mostly limited to renewed exploration of the Ruby Hill, Adams Hill, and Prospect Ridge mines(Roberts et al 1967: 79). The most significant efforts were at the Fad shaft at Ruby Hill and the TL shaft at Adams Hill, both of which should be preserved as visible evidence of Post-Bonanza mining processes. Nolan(1962: 53) considers the use of rotary drills for deep prospecting and advanced water pumping methods to be perhaps the most significant mining methods to be developed in the Eureka district. Both of these are Post-Bonanza Period behavioral processes that should be considered in preservation planning for the district.

UNIQUE HISTORICAL EVENTS

The published criteria for evaluating eligibility for listing on the National Register of Historic Places includes association with unique historical events - the first, the largest, the most productive, the only, important people, and important events. Several such historic structures or archaeological sites may exist In the Eureka mining district that should be protected, although the number is likely to be relatively small in comparison to the "pattern and process" sites, above. Two such sites from the Bonanza Period are the Eureka mine in New York Canyon and the Tannehill cabin. The former is the earliest mine in the district. Supposedly still standing at the south end of the town of Eureka, the latter is reputed to be the earliest cabin in the district and was occupied by one of the prospectors who made the original strike and formed the first mining company. Whether or not the "log" cabin presently identified as the Tannehill cabin is legitimate should be ascertained. Bonanza Period sites of this kind are expected to be somewhat more abundant. The McCoy smelter was the first to successfully treat the Eureka ores. And both the Richmond and the Eureka Con smelters were the largest mills during the Bonanza Period. Certainly the most productive mines at Ruby Hill should be included, along with what remains of the Eureka and Palisade Railroad and its branch line, the Eureka and Ruby Hill. In the town of Eureka itself are several historic buildings associated with important people of this period, such as the house of Governor Sadler. The earliest cut stone and brick buildings in town should be preserved, along with the archaeological remains of Eureka's

"chinatown. Archaeological remains of the charcoal burners still existing in the district should be located and protected as a record of a unique Bonanza Period lifestyle, as well as a unique technology. Post-Bonanza Period sites associated with unique historical events are limited. Most probably the experimental drilling and pumping work at the Fad shaft and the TL shaft should be considered in this category. Without question, a number of other historic structures and archaeological sites should be included as well. What is most urgently needed is a detailed review of Eureka's history to identify what unique historical events are most significant, along with an intensive survey of the historic mining district to determine what tangible evidence of these events still exists.

KEY RESEARCH QUESTIONS

The last criterion used for determining eligibility for placement on the National Register of Historic Places is "information content" of sites that could be used to study key research problems. Several questions can be identified for the Eureka Mining District, some of which are discussed as well in Bowers and Muessig(1982). The archaeological record of the Pre-Bonanza Period is expected to contain information about the earliest expansion of the American mining frontier into the area. Perhaps most important are questions about what might be called "Prospector Society" - the demography,

technology, and social life of the leading edge of the mining frontier. Virtually nothing is known from written accounts about the discoverers of the Eureka Mining District until late in 1869. One critical part of such a research domain is the study of interaction between the prospectors and the Shoshoni who occupied the region prior to the historic period. A second is the study of "pre-industrial" mining.

Another set of key research questions can be identified for the Bonanza Period. Most of these are related to industrialization, urbanization, ethnicity, and environmental change. The first of these involved rapid technological, demographic, and social change throughout the district within a very short time. Questions about industrial change on the Eureka mining frontier might include such things as the extent to which "appropriate" technology countered the use of standardized and mass-produced machinery; the formation of company towns; the hierarchical restructuring of mining society along the lines of differences in wealth; and the formation of "world system" linkages. The process of urbanization creates a related set of questions. One set of questions has to do with the process itself - what does the archaeological record tell us about the evolution of the towns of Eureka and Ruby Hill? Another set of questions is directed at urban patterning on the mining frontier - how are Eureka and Ruby Hill arranged in space, and how do these arrangements change over time? Yet another set of questions about urbanism is concerned with the relationships between the urban nuclei and their rural hinterland. The third research domain that is

significant to the Bonanza Period is ethnicity. Several ethnic groups played an important role in the Eureka Mining District about which written accounts tell us little. Of particular importance are the immigrant Chinese, the Italian and Swiss charcoal burners, and the historic Shoshone. Much of the existing data on these groups is contained within archaeological sites in the district. Finally, the fourth research domain is environmental change. Eureka was famous as the "Pittsburgh of the West" during the Bonanza Period because of the massive smoke emitted by its smelters. Furthermore, the landscape of the mining district was virtually deforested by the activities of charcoal burners. Both of these events suggest the importance of the study of environmental change through the archaeological record.

Questions about the Post-Bonanza Period are more limited. Technological change is an obvious research domain. What is the difference between the "labor-intensive" industrial mining of the Bonanza Period, and the more "tool-intensive" mining of the Post-Industrial Period? The expected demographic and social changes brought about by the rapid decline of mining and milling after 1891 suggest two other fruitful areas of study. Finally, environmental change is a key research domain. For example, what is the nature of and rate of reforestation of the landscape?

MANAGEMENT RECOMMENDATIONS

Several suggestions for the management of the archaeological resources in the Eureka Mining District have been made already in

this section. The remaining recommendations emerge from these. First of all, it is clear that the boundaries of the existing historic district should be enlarged to encompass the historic Eureka Mining District. The cultural resources in the town of Eureka are but a small part of what is necessary to adequately understand and interpret this region. As many researchers have pointed out(e.g., Bowers and Muessig 1982), the mining district is an integrated social, demographic, and technological system. Secondly, the Eureka Mining District is in desparate need of an intensive archaeological survey to inventory existing cultural resources. Most critical is documentation of mining sites outside the town of Eureka; some literature search was done by the Texas Tech Survey but virtually no field work has been accomplished to date. After completion of the inventory, prioritization of the historic properties must be done accordingly to the criteria identified above, the third management recommendation. And, finally, the fourth management recommendation is the development of a specific preservation plan for each of the cultural resouces with high priority.

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APPENDIX I

A GAZETTEER AND PLACE NAME ORIGIN OF THE EUREKA MINING DISTRICT

By

Alvin R. McLane

A GAZETTER AND PLACE NAME ORIGIN OF THE EUREKA DISTRICT

by
Alvin R. McLane

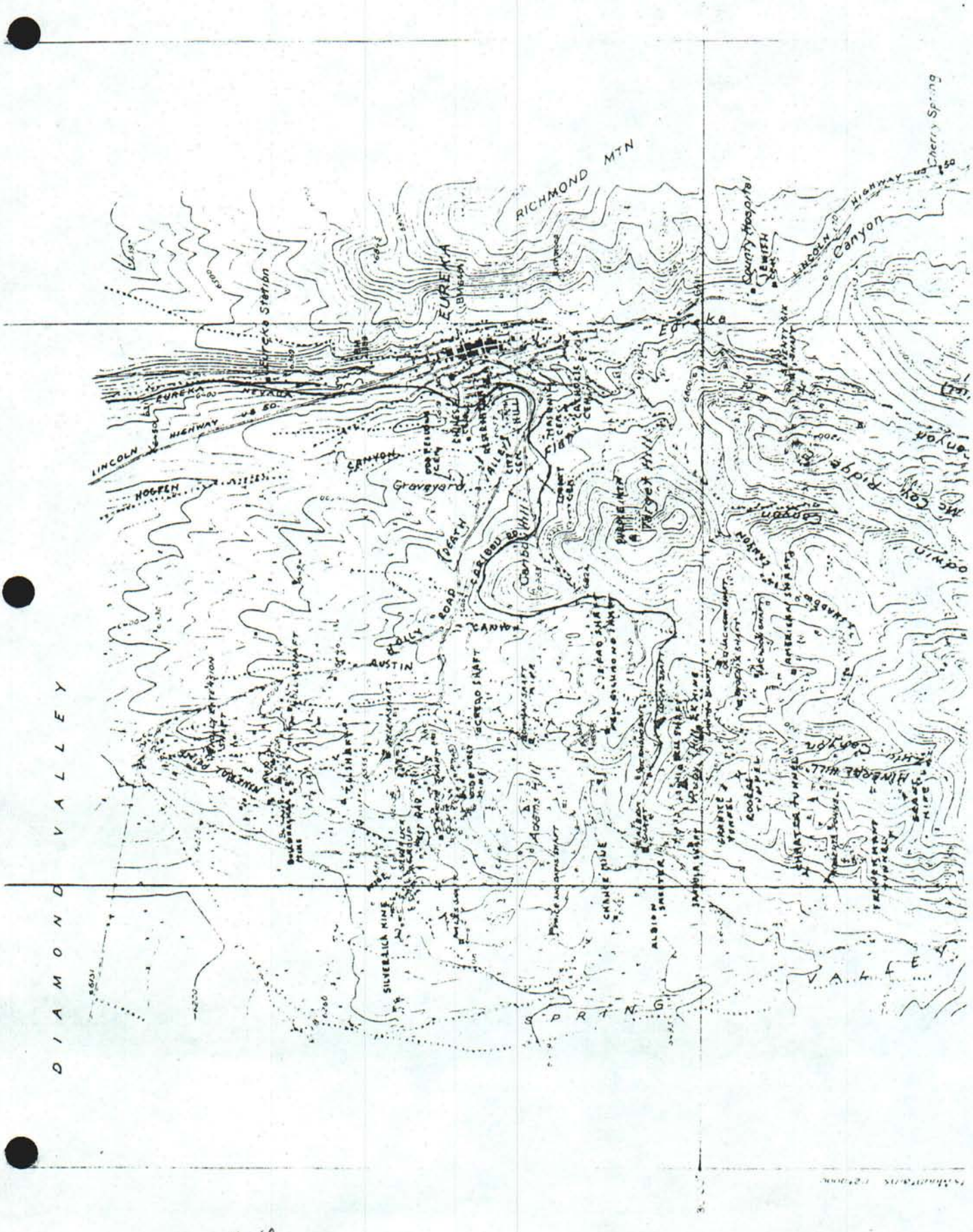
The place names of the Eureka District covers the north portion of the Fish Creek Range, an area of 28 square miles. Eureka lies in the northeast part of the rectangle, Mineral Point in the northwest, Hoosac Mountain to the southeast, and 9571-foot Prospect Peak in the southwest. The area is covered by the Eureka Mining District topographic map, prepared by R.R. Monbeck of the U.S. Geological Survey in 1931.

Many of the place names came from this map. Other named features are from "Atlas to Accompany the Monograph on the Geology of the Eureka District, Nevada by Arnold Hague [Frederick A. Clark, topographer], Washington, 1883." Thomas B. Nolan's "The Eureka Mining District, Nevada" was most useful, especially for the location of mine names. Data was also gathered from several other historical maps.

Information on the names is taken from various geology and mining reports, Angel's "History of Nevada," Molinelli's "Eureka and its Resources," "Mining and other Resources of Eureka County, Nevada" by the American Mining Congress, and other reports and articles.

Abbreviations have been kept to a minimum and follow that adopted for place name compilations by Camp Nevada of Reno. For instance "ft." equals feet., "mi." is mile(s), "S" is south and "RR" represents railroad.

Acknowledgments are extended to Eureka residents who were especially gracious. J.P. "Jim" Ithurralde, Eureka County Assessor, provided place names not on current maps. Michael N. Rebaleati, Eureka County Recorder/Auditor, granted use of early maps, especially manuscript vellums of proposed railroad lines out of Eureka. And Thomas B. Nolan, former Director, U.S. Geological Survey, candidly discussed Eureka and its mines during a personal interview.



Map 3. ~~South~~ North Half of USGS Eureka Mining District Topographic Map Showing Place Name Locations.

Map 4. ~~North~~ South Half of USGS Eureka Mining District Topographic Map Showing Place Name Locations.

ADAMS HILL, 6918 ft.
A flat-topped mass of limestone located 1.8 mi. W of Eureka. Possibly named for W. Adams, Eureka's first Justice of the Peace (Angel, 1881, p. 439)

ALBION SHAFT, ALBION SMELTER
Located on the W side of Ruby Hill. The Albion Claim was patented in July 1878 by Albion Mining Co., miners from the nearby Richmond Mine. Early work was interrupted by extensive and costly litigation with the Richmond Co. The shaft was mined to the third level where 6,703 tons of silver, gold and lead was valued at $245,305 from 1881-1890. Slag heap from the smelter is located immediately S of the mine (Angel, 1881, p. 434; Nolan, 1962; Roberts, et al., 1967, table 14).

ATLAS SHAFT
Located at the head of Goodwin Canyon 0.7 mi. NE of the Diamond Tunnel. The Atlas Claim was located by John E. Plater in December 1874. During 1875-1879, 12,179 tons of silver, gold and lead ore valued at $569,419 was taken from the 800-ft. shaft (Nolan, 1962, plate 9, 11; Roberts et al., 1967, table 14).

AMERICAN SHAFT
Located in a small drainage between Zula and Shadow canyons. This was a silver, gold and lead prospect.

AUSTIN CANYON
Drainage originating W of Target Hill that trends N past the E side of Mineral Point. Apparently so named because the early road from Austin to Eureka came this way.

BELL SHAFT
Mine on the E side of Ruby Hill.

BERRYMAN TUNNEL
This silver, gold and lead prospect is located 0.2 mi. N of Diamond Tunnel.

BOWMAN SHAFT
Silver, gold and lead mine located about 0.3 mi. E of Adams Hill. From 1876-1892, 1,097 tons were mined valued at $51,092 (Nolan, 1962, plate 7; Roberts et al., 1967, table 14).

BULLWHACKER MINE
Located just S of summit of Mineral Point. From 1915-1927, 67,271 tons of silver, gold and lead ore was mined and valued at $1,156,738. The Bullwhacker Claim was patented by Herman Heynemann in December 1872.

BURNING MOSCOW MINE
Located in the southern part of the Eureka District on the east side of Rocky Canyon, 0.9 mi. S of Diamond Peak.

CALIFORNIA TUNNEL
Located in New York Canyon 0.6 mi. NE of Diamond Mine. Silver, gold and lead (3,378 tons) valued at $108,644 was mined here from 1879-1917 (Nolan, 1962, plate 11; Roberts et al., 1967, table 14).

CARIBOU HILL, 6983 ft., CARIBOU ROAD
The road extends W from Eureka to Ruby Hill, following the former Ruby Hill RR line. The hill is located one mi. W of Eureka. On an early map the name is spelled Cariboo.

CATLIN SHAFT
In New York Canyon 0.6 mi. NE of the Diamond Tunnel.

CAVE CANYON
A steep, 0.7 mi. long canyon draining W of Prospect Ridge into Spring Valley Canyon. Named for the natural vertical shaft found there (see CONNERS CAVE).

Cedar Hill Cemetery, see ODD FELLOWS CEMETERY

CHANCE MINE
Located 0.6mi. NW of Ruby Hill.

CHANDLERS QUARRY
This tuff quarry is located on the N side of Reservation Hill just W of Eureka. Several quarries were located around Eureka. T.B. Nolan (1962, p. 16,17) makes this note:

> The blocks of tuff from these quarries were extensively used during the early history of the town as foundation stone for many buildings; some were completely constructed of it. The stone stands well, as may be seen in the Eureka County Courthouse, which was built in 1879. None of the quarries is now active.

CHARTER TUNNEL
This silver, gold, lead prospect is located on the W side of Mineral Hill.

CHERRY SPRING
Located in Eureka Canyon about 0.9 mi. SE of the County Hospital.

CHICAGO TUNNEL
A silver, gold and lead prospect located 1.75 mi. N of Prospect Peak.

CHINESE CEMETERY
Located on the N edge of Reservation Hill near the present high school. One lone grave with an iron fence remains. Also called the Pestilence Cemetery.

CLARKS SPRING
Located at the head of New York Canyon, W of Hamburg Ridge.

COLORADO TUNNEL
Silver, gold, lead prospect situated 1.75 mi. N of Prospect Peak. John E. Jones et al. patented the Colorado Claim during October 1874.

CONICAL HILL, 7264 ft.
An isolated peak located in Windfall Canyon. The hill rises about 250 ft. "...above the level of the Secret Canyon Road and from its peculiar outlines, the result of erosion, it has been designated Conical Hill" (Hague, 1892, p. 168).

CONNELLY MINE
Located 1.65 mi. NE of Diamond Tunnel. From 1873-1916, 4,543 tons of gold and silver was mined with a value of $177,946 (Nolan, 1962, plate 11; Roberts et al., 1967, table 14).

CONNORS CAVE
Located in Cave Canyon on the W side of Prospect Ridge. The cave is a pit reaching a depth of 96 ft., of which 50 ft. is a free fall. The cave was napped by Robert Soulages and Alvin McLane in 1964. They found in the cave several rat skeletons, old rotted ladders, but only a small amount of cave formations. The late E.R. Larson (personal commun., mid-1960s) related that the name of the cave had always been known as Connors. The name is probably derived from the nearby Silver Connor Shaft. The California-Nevada Speleological Survey visited the cave in August 1952 and named it Snow Cavern, for a cone of firn snow on the cavern floor.

COUNTY HOSPITAL
This abandoned brick building is located about one mi. S of Eureka in Eureka Canyon.

CREDO SHAFT
Located about 0.4 mi. NE of Adams Hill.

Croesus Mine, see EUREKA CROESUS MINE

CYANIDE SHAFT
Located about 0.3 mi. N of Adams Hill. From 1899-1922, 1,817 tons of silver, gold and lead ore was extracted valued at $119,753.

DEAD BROKE TUNNEL
This small producer of gold, silver and lead, had 470 tons of ore valued at $17,567 from 1873-1897. The mine is located 1½ mi. N of Prospect Peak.

Death Valley, see GRAVEYARD FLAT

DIAMOND VALLEY

Is a structural basin extending from Spring Valley, near Mineral Point, N 48 mi. The basin is 12 mi. wide and is bounded on the E by the Diamond Mountains and on the W by the Whistler and Sulphur Spring ranges. According to Edna Patterson (1964, p. 26) the Diamond Mountains and Diamond Valley were named for Jack Diamond, a prospector who lived at Diamond Springs for a short time during the early settlement of the country.

DIAMOND MINE

Also called the Diamond Excelcior Tunnel, this mine is located at the head of New York Canyon, 1.3 mi. NE of Prospect Peak. This silver, lead and gold mine produced 57,800 tons of ore valued at $1,324,194 from 1894-1897. In 1953, the Consolidated Eureka Mining Co. initiated exploration and rehabilitation of the old workings (Nolan, 1962; Roberts et al., 1967, table 14).

DISTINCTION TUNNEL

In New York Canyon 0.6 mi. NE of Diamond Tunnel. From 1913-1920, 480 tons of silver, gold and lead ore was mined with a value of $25,569 (Nolan, 1962, plate 11; Roberts et al., 1967, table 14).

DOMINIC TUNNEL

Gold, silver and lead prospect located 0.3 mi. SW of Diamond Tunnel.

DUGOUT CANYON, DUGOUT TUNNELS

The canyon is a drainage W of Prospect Peak, named for the Dugout Tunnels on the N side of the canyon. The Dugout Tunnels are a couple of adits presently containing water. During the period 1874-1936, the mines had a reported production of 502 tons of ore with a gross yield of $42.503 (Nolan, 1962, p. 72).

DUNDERBERG INCLINE

Mine located about 0.8 mi. NE of Diamond Tunnel.

EL DORADO MINE

Located 0.9 mi. N of Diamond Tunnel. The mine produced 802 tons of ore valued at $69,781 from 1873-1892 (Nolan, 1962; Roberts et al. 1967, table 14).

EUREKA

The town of Eureka dates from 1869. Its first proprietors were Maj. W.W. McCoy and Alonzo Monroe, both of whom surveyed city lots, McCoy from the S, where they met at the present center of town at Bateman St. Joseph T. Curtis (1884, p. 4) made this vivid account ca. 1883;

> ....that in the course of twelve years this mining camp has been twice partially washed away by floods, once ravaged by the small-pox, and twice almost completely destroyed by fire, but remains to-day, after 13 years of prosperity, one of the most productive mining towns on the Pacific Slope.

The history of Eureka is covered in another section of this report. The town is located in EUREKA CANYON, a drainage about seven mi. long, a part of which separates the Fish Creek Range and the Diamond Mountains. Eureka is located in SE EUREKA COUNTY. The county was created by legislative act of March 1,1873. Boundary changes were made in 1875, 1877 and 1881.

EUREKA & COLORADO RIVER RAIL ROAD

Business was so lucrative in the Eureka District during 1880 that a railroad line was envisioned going from Eureka to the Colorado River via Pioche. In 1881, 10 mi. of railroad grade was constructed up Eureka Canyon over Pinto Summit before the project was abandoned. The route can still be seen today (Myrick, 1962, p. 99; Map of the located line of the Eureka & Colorado River Rail Road in Eureka County, Nev., Sept. 5, 1881).

EUREKA AND PALISADE RAILROAD

With the advent of important silver and lead production from the Eureka District in the early 1870s, mainly by the Eureka Consolidated Mining Co. and Richmond Consolidated Mining Co., transportation became a problem. Gilmer and Salisbury, stage operators, and others banded to form the Eureka & Palisade RR in November 1873. Construction soon started on the 84 mi. of narrow gauge roadbed, and on October 22, 1875 the first train arrived in Eureka over the new railroad. There were periods of boom and bust caused by slow business and complete railroad washouts. The Eureka & Palisade RR was finally abandoned September 21, 1938 (Myrick, 1962, p. 90-111).

EUREKA CONSOLIDATED SMELTER

The site of the smelter is marked by great slag heaps N of Eureka. In 1878, 16 furnaces were operating in the Eureka District, reducing 1,000 to 15,000 tons of ore per day. That number was soon reduced to the smelters of the Richmond Consolidated and the Eureka Consolidated where the facilities were superior and ore could be processed at cheaper rater. Others smelters operating in the area during the 1870s and 1880s include the Hoosac, Albion, K.K. Consolidated (Silver West), Matamoras and Atlas. The Eureka Consolidated set up a large refinery in 1886. This closed down in 1891 (American Mining Congress, 1907).

EUREKA CROESUS MINE

Located in New York Canyon 0.65 mi. NE of Diamond Mine. Silver, gold and lead was taken from the mine from 1879-1917 worth $108,644 from 3,378 tons.

EUREKA HOLLY MINE

Formerly called The Idaho Mine, then the Holly Mine, the property was probably named for the Holly Ranch located 4 mi. W of Eureka. The mine is located on the E side of Mineral Point and the claim was patented by W.H. Gray in August 1877. From 1915-1917, 67,271 tons of silver, gold and lead were taken from the mine valued at $1,156,738. The American Mining Congress (1909, p. 56) credits the Holly Mine with contributing $41,000 before 1908 (Nolan, 1962, fig. 6, plate 6; Roberts et al., 1967, table 14).

Eureka Mountains, see FISH CREEK RANGE

EUPEKA NEVADA TUNNEL
Located in New York Canyon 0.4 mi. E of Diamond Tunnel. From 1917-1923, 218 tons of silver, gold and lead was extracted with a value of $6,818.

EUREKA STATION
The station at the end of the former Eureka and Palisade RR is located in Eureka Canyon, about 0.75 mi. N of downtown Eureka. In 1876 structures at the station included a turn table, engine, boarding, freight, lodging and slaughter houses, a granary, stalls, derrick, platforms, store, corrals, a cabin and shed. The present two-story metal covered frame structure was built in 1920 (Edaburn, 1982; Map of Eureka Station, Eureka Co. Nevada Showing Depot and Shop Grounds of the Eureka and Palisade Railroad. January 1876).

EUREKA TUNNEL
Located 0.8 mi. N of Diamond Mine. Silver, gold and lead were taken from the mine during 1881-1901 amounting to 4,550 tons valued at $206,308 (Nolan, 1962, p. 9; Roberts et al., 1967, table 14).

EXCELSIOR TUNNEL
From 1873-1897, 1,759 tons of gold, silver and lead were taken from the mine valued at $89,762 tons. It is located on the NE side of Diamond Peak, about 0.3 mi. SW of Diamond Tunnel.

FAD SHAFT
Located about ½ mi. NE of Ruby Hill. This zinc and lead workings has a vertical shaft of 2,465 ft and laterals that were started in 1942 by the Eureka Corp. No production recorded through 1962. The Fad Claim was patented May 1908 (Nolan, 1962, plate 7; Sharp, 1947).

FISH CREEK RANGE, 9571 ft.
The northern part of the Fish Creek Range contains the mines of the Eureka District. McLane (1978, p. 45) describes the range like this:

> Fish Creek Range is located in Eureka County south of the Diamond Mountains. The range extends south of Eureka 26.5 miles to Cockalorum Wash, just south of the boundary of Nye County. The Range is a rough mass, from two to 10 miles wide, of very diversified topographic forms - deeply scoured by narrow gorges.

The range rises some 2000 to 3000 ft. above the surrounding valleys. The culuminating point is Prospect Peak at 9571 ft. The name of the range is probably named after Fish Creek in Fish Creek Valley. The Large orifices where springs supplying the creek rised contain abundant fish. Henry Clay Fenstermaker settled near these "wells" in the early 1870s (Tipton, 1971). Arnold Hague (1892) considered the Fish Creek Range and adjacent areas as the Eureka Mountains (McLane, 1978, p. 45).

FRAZER TUNNEL
Located 0.8 mi. N of Diamond Tunnel. This silver, gold and lead prospect was named for its owner Alexander Frazer who sold his interest to J.S. McQuillan of Tonopah about 1908 (American Mining Congress, 1908, p. 54; Nolan, 1962).

FRENCHMANS TUNNEL
In a steep drainage W of Mineral Hill, this is a silver, gold and lead prospect.

GOODWIN CANYON
Heads in the Fish Creek Range and trends N toward Eureka past the E side of Target Hill. Named for C.C. Godwin, whom later became famous as editor of the Territorial Enterprise in Virginia City. Goodwin was one of the early operators in the Eureka District. He erected the Jackson Smelter to process ores from the Jackson Mine. Goodwin netted himself and associates a quarter million dollars, which was perhaps the first profitable mining in the district (Molinelli, 1879, p. 18).

GORDON TUNNEL
Located in a steep W drainage of Prospect Ridge, 1.65 mi. due N of Prospect Peak.

GORMAN HILL, 7400 ft.
This feature is located between New York and Windfall canyons S of Eureka. F.O. Gorman was an early constable of Eureka Township, but it isn't known if his name is bestowed on this point. Early maps and literature refer to the peak as New York Hill.

GRANITE TUNNEL
A silver, gold and lead prospect on the south side of Ruby Hill.

GRANT MINE
The Grant Claim was patented by W.W. McCoy June 1874. The silver and lead mine is on the south point of Mineral Hill. During 1873-1890, 681 tons of ore netted $38,912 (Nolan, 1962).

GRAVEYARD FLAT
Also referred to as Death Valley, this area ½ mi. W of Eureka contains six cemeteries - the Odd Fellows, Chinese, City, County, Masonic and Catholic.

Great Republic Mine, see EUREKA CONSOLIDATED MINE

HAMBURG MINE
The Hamburg Claim was patented May 1873 by George F. Braggs. The mine is located 0.6 mi. E of Diamond Tunnel. The double compartment shaft was down to 800 ft. in 1908, with main levels at several depths, with an aggregate length of about two mi. From 1871-1923, 14,352 tons of gold, silver and lead ore was valued at $433,899 tons (Nolan, 1962).

HELEN SHAFT
A silver, gold and lead prospect located 1.2 mi. N of Adams Hill.

HOGPEN CANYON
This drainage trends N from Reservation Hill. The name is derived from the early Chinese hog ranch once situated there. The canyon was also known as Pesthouse during Eureka's early days (Map of a portion of the line of the Nevada Midland Rail Road Co. in Eureka County. Nevada. Oct. 27, 1881).

HOLLY EXTENSION MINE, HOLLY ROAD
Located near the N end of Mineral Point. From 1877-1892, 2,765 tons of silver, gold and lead ore was valued at $72,112. Holly Road extends westward from near the Masonic Cemetery to Mineral Point.

Holly Mine, see EUREKA HOLLY MINE

HOOSAC CANYON
Heads on the E side of Hoosac Mountain and drains SE carrying the water of Pinto Creek.

HOOSAC MILL, HOOSAC MINE
The mine was located in 1869 and the Hoosac Claim was patented by the Dreadnaught Co. in April 1873. The mine is located on the SE side of Hoosac Mountain and was one of the first producing in the Eureka District. Hague (1892, p. 113) reported that the shaft, 200 ft. in depth, had been sunk in quartzite with a level on the bottom 300 ft. in length. Silver and lead ore valued at $500,000 had been taken out in a short time. According to Nolan (1962, p. 71) the mine produced 17,292 tons valued at $158,616 from 1872-1882). The Hoosac Mill was a single stone furnace of 45 tons daily capacity (Angel, 1881, p. 432).

HOOSAC MOUNTAIN, 8492 ft.
Is located in the southern part of the Eureka District between Hamburg Ridge and Hoosac Canyon.

INDUSTRY TUNNEL
Located 0.7 mi. N of Diamond Tunnel. The Industry Claim was patented by Jonas B. Osborne in September 1874. From 1873-1888, 512 tons of Silver, gold and lead ore was mined and valued at $40,551.

JACKSON MINE
Located about 0.6 mi. SE of Ruby Hill. The original owners of the mine extracted considerable ore during 1869-1871, but subsequently sold to a San Francisco firm. Bullion yield in 1879 was $132,000. A track was laid to the mine by the Ruby Hill RR Co. The Matamores Company's furnace reduced the ore and the bullion was shipped to San Francisco for further refinement (Angel, 1881, p. 433). The American Mining Congress (1909, p. 41-42) noted that the mines consisted of two shafts. The main one had two compartments 600 ft. deep, with three main levels. Eventually, silver, gold and lead was mined below the 5th level, where 34,013 tons of ore yielded $1,070,925 (Nolan, 1962; Roberts et al., 1967, table 14).

JEWISH CEMETERY
This is a short distance S of the old County Hospital. Three graves remain there.

K.K. CONSOLIDATED MINE
Is on the E side of Ruby Hill. It was located by W.S. Keyes in 1872, then Superintendent of the Eureka Consolidated Mine. Silver, gold and lead was mined here in 1873-1883, 79,210 tons valued at $2,001,126 (Nolan, 1962; Roberts et al., 1967, table 14).

LAWTON SHAFT
Located on E side of Ruby Hill.

LOCAN SHAFT
Located on the E side of Ruby Hill, and also called the New Shaft. This was sunk to 1200 ft. by the Eureka Co. In search for down-faulted ore bodies; the effort was unsuccessful (Nolan, 1962, p. 3).

LONG LOST JEWELS TUNNELS
Prospects on the E side of New York Canyon, 0.3 mi. E of Eureka Croesus Mine.

LORD BYRON TUNNEL
Is just east of Prospect Ridge crest, 0.4 mi. N of the Diamond Tunnel. The Lord Byron Claim was located by Herman Heynemann in December 1872. From 1885-1894, 2,613 tons of silver and lead ore yielded $118,578 (Nolan, 1962, plate 9; Roberts et al., 1967, table 14).

MACKINTOSH TUNNEL
Also spelled McIntosh, Macintosh and MacKentosh, this mine is located near the head of Windfall Canyon, 0.2 mi. W of the Diamond Tunnel. The silver, gold and lead prospect was named for Richard Mackintosh, who had patented claims and a mine owner (American Mining Congress, p. 30).

MAGNET SHAFT
The Magnet Claim was patented by Maurice Hartnett in May 1877. This silver and gold prospect is located one mi. N of Diamond Mine.

MAYBERRY TUNNEL
Silver, gold and lead prospect located near the head of Goodwin Canyon. Probably named for A.P. Mayberry, Superintendent of the Richmond-Eureka Mining Co. in the early 1900s (American Mining Congress, 1909, p. 48).

McCOY RIDGE, 7468 ft.
This 1½ mi. long N-S feature is located between Goodwin and New York canyons, just S of Eureka. The name honors Major W.W. McCoy who divised a satisfactory furnace in July 1869 to smelt the argentiferous lead ore from Eureka. McCoy was also one of the early proprietors of Eureka townsite (Nolan, 1962, p. 54).

MERRITT TUNNEL
Gold prospect located on W side of New York Canyon between Gormon Hill and McCoy Ridge.

METAMORAS SHAFT
Spelled Matamoras in early literature and maps, this silver, gold and lead mine is located 1.7 mi. N of Prospect Peak. From 1874-1887, 1,424 tons of ore mined was valued at $80,080. The Metamoras claim was patented August 1877 by Albert Sturges. The Metamoras furnace started up on September 8, 1876. It was a stone furnace of 50 tons daily capacity (Angel, 1881, p. 437; Nolan, 1962).

MINERAL HILL, 7714 ft.
Lying W of Zula Canyon, this 0.6 mi. long hill is on the axis of the Fish Creek Range S of Ruby Hill.

MINERAL POINT, 6527 ft.
A 0.75 mi. long ridge, W of Eureka, comprising the N end of the Eureka Mining District.

MURRAY SPRING
Water source located on the SE side of Hoosac Mountain.

LUCKY SPRINGS
Water found at the S end of Spring Ridge. In the Hague (1892) atlas, a Lucky Spring is labeled a short distance W of the Windfall Shaft.

NAPIAS
An early post office name at Eureka. Establised when this area was in Lander County on January 13, 1870 and discontinued on the 27th of the same month when Eureka became the post office (Harris, 1973, p.23, 38). Napias is a Shoshoni word meaning silver (Angel, 1881, p.440).

NEVADA MIDLAND RAIL ROAD
In 1881 this line was projected to extend from the Ruby Hill Railroad at Graveyard Flat westward down Hogpen Canyon, across Diamond Valley to Devils Gate and probably on to Austin. Grade was never cut for this line (Map of a portion of the line of the Nevada Midland Rail Road Co., Eureka = County. Nevada. Oct. 27, 1881).

NEW RICHMOND SHAFT
Located 0.4 mi. NE of Ruby Hill.

NEW WINDFALL SHAFT
Located about 0.2 mi. N of the Windfall Mine.

New Shaft, see LOCAN SHAFT

NEW YORK CANYON
In 1866 the Eureka prospectors conveyed their property to a New York Company, giving the name to this major drainage in the Eureka District (Molinelli, 1879, p. 12). New york Canyon trends N, juncturing with Eureka Canyon just S of Eureka.

New York Hill, see GORMAN HILL

ODD FELLOWS CEMETERY
Also called Cedar Hill, this is one of the cemeteries W of Eureka.

OLD JACKSON SHAFT
Situated ½ mi. E of Ruby Hill

ORANGE MINE
Located 0.4 mi. N of Diamond Tunnel. Silver, gold and lead, 254 tons, were mine valued at $21,684 from 1871-1873 (Nolan, 1962).

Pesthouse Canyon, see HOGPEN CANYON

Pestilence Cemetery, see CHINESE CEMETERY

PHOENIX MINE
This one time important shaft is located 0.4 mi. SE of Ruby Hill. Located in 1870 and development started in 1871. Large ore bodies were opened near the surface in 1872. Strife and incompetent management hurt the company and work was suspended in 1878, up to which time the yield aggregated $457,000. The mine was then perodically worked. A depth of 710 ft. was reached when a strong flow of water ceased operations on the 20th of January 1880 (Angel, 1881, 433-434). The American Mining Congress (1909, p. 42) relates that the mine is a double compartment shaft down 570 ft., with five main levels and an incline down to the 6th level. According to Nolan (1962) this silver, gold and lead mine extends below the 5th level. From 1873-1913, 5,428 tons of ore was valued at $156,043.

PINTO CREEK
Heads on the E side of Hoosac Mountain and follows the SE drainage of Hoosac Canyon.

PRINCE AND DAVIS SHAFT
Silver, gold and lead prospect located ½ mi. W of Adams Hill.

PROSPECT
Post office established March 3, 1893 and discontinued April 30, 1918 (Harris, 1973, p. 42). A photo in the American Mining Congress (1909, p. 36) booklet, taken by C.H. Cormon in 1907, shows about 24 structures when 50 miners were employed at the Diamond Mine. The photo shows hoisting works, blacksmith shop, boarding house, etc. The community was located about four mi. S of Eureka in New York Canyon, a little below the Diamond Tunnel.

PROSPECT MOUNTAIN TUNNEL
This silver, gold and lead prospect is located 2 mi. N of Prospect Peak.

PROSPECT PEAK, 9571 ft.

This summit of the Fish Creek Range is the highest point in the study area. It is a rather sharp summit rising 2100 ft. above Spring Valley Canyon on the W. Much timber for the Eureka mines came from this mountain. Around its summit is an isolated stand of Great Basin bristlecone pine (Pinus longaeva).

PROSPECT RIDGE, 9571 ft.

Is that part of the Fish Creek Range extending from Fish Lake Valley to Diamond Valley. Most of the mines of the Eureka District are located in this mountain block that culminates in 9571-ft. Prospect Peak. Hague (1892, p. 19-20) describes Prospect Ridge this way:

> This ridge stands out as the most prominent orographic feature of the Eureka Mountains. It is situated in the very center of the mountains and presents a bold, serrated outline, extending with an approximately north and south trend from Diamond Valley to the Fish Creek Basin. From Diamond Valley the northern slopes rise gradually out of the plain to the summit of Ruby Hill, beyond which the mountains assume a more rugged aspect, continuing southward in an unbroken ridge until cut off sharply by eruptive masses or concealed beneath Quaternary accumulations of the valley.

PURPLE MOUNTAIN, 7225 ft.

This mass of rhyolite is located one mi. SW of Eureka and rises 600 ft. above its base. It is the N summit of Target Hill.

RESERVATION HILL

The small hill located just W of Eureka. The tank holding Eureka's water supply is on top.

RICHMOND-EUREKA MINE

This silver, gold and lead mine is located in Ruby Hill. It was taken to 900 ft.through the Richmond and Lookout shafts, where 294,095 tons of ore was valued at $4,021,674 from 1871-1939 (Nolan, 1962; Roberts et al., 1967, table 14). A photograph taken by C.H. Gorman shows a $200,000 plant built at the mine in 1906 (American Mining Congress, 1909, p. 47).

RICHMOND MOUNTAIN, 8368 ft.

The summit of this peak is located in the Diamond Mountains about two mi. SE of Eureka. The mountain as described by Hague (1892, p. 240) is as follows:

> The culminating point of Richmond Mountain, situated near its southern end, attains a elevation of nearly 2,000 [2400] feet above Diamond Valley. An abrupt wall, 800 feet in height, forms the southern end, and from its summit the mountain falls away to the north for nearly three miles... Across its broadest expansion, in an east and west direction, the mountain measures three miles. For such an accumulated pile of lavas it presents a uniform, monotonous appearance, relieved by occassional shallow drainage depressions flowing northward, inclined with the natural slopes of its lava ridges.

RICHMOND SHAFT
Located on N side of Ruby Hill. The main shaft is a double compartment 1,200 ft. deep (American Mining Congress, 1909). From 1873-1905 silver, gold and lead were mined, 488,081 tons were valued at $15, 209, 443 (Nolan, 1962; Roberts et al., 1967, table 14).

RICHMOND SMELTER
The site of the Richmond Consolidated Smelter is on the S edge of Eureka, marked by a large black slag heap. The Richmond Consolidated Mining Co. erected smelters about 1871. A large updated refinery was added in 1877 and closed down in 1889 (American Mining Congress, 1909).

ROBERTS TUNNEL
Silver, gold and lead prospect on the W side of Mineral Hill.

ROCKY CANYON
Heads high on the SE shoulder of Diamond Peak and drains SE to Secret Canyon.

ROGERS TUNNEL
Silver, gold and lead prospect located between Mineral and Ruby Hill.

RUBY HILL RAILROAD (EUREKA & RUBY HILL NARROW GAUGE RAILROAD)
The line was established to haul ore from the Eureka Consolidated mines on Ruby Hill to its smelter at the N end of Eureka. Construction started May 1875, while the Eureka and Palisade RR was still some 40 mi. away. The three-foot wide line consisted of three miles to Ruby Hill, with branches extending to other mines and mills, amounting to a total of seven miles. The line was abandoned in 1893 during the mining slump.

By 1905 Eureka was booming again. The Richmond-Eureka Mining Co. advanced money to the Eureka & Palisade RR to rebuild the Ruby Hill. Regrading shortened the roadbed from seven to four miles. Ore was hauled over the new line in 1906 and operated several more years before abandonment (Myrick, 1962, p. 91-107).

RUBY DUNDERBERG INCLINE
Located on the W side of New York Canyon, 0 3 mi. N of the Distinction Tunnel

RUBY HILL, 7264 ft.
About 2 mi. SW of Eureka. In 1869, when Owen Farrell, M.G. Clough and Alonzo Monroe were prospecting in the Diamond Mountains, an Indian brought them a piece of mineral rock. For $10 the Indian guided them to the N end of the Fish Creek Range to a place that they named Ruby Hill. They located the whole peak and their their first prospect they named the Great Republic which became the famous Eureka Consolidated Mine. The hill is noted for its limestone deposits of precious metals which up to 1880 had yielded over $60,000,000 (Angel, 1881, p. 443; Hague, 1892, p. 115; Vanderburg, 1938, p. 31).

RUBY HILL (Town)
The town is located on the N and E sides of Ruby Hill. By 1873, the town was large enough to have a post office which was established on September 23 (and abandoned November 30, 1901) (Harris, 1973, p. 45). The census of 1880 gave the town a population of 2,165. It was the home of about 900 miners and their families. The town had Roman Catholic and Protestant Episcopal churches, Miners Union Hall, theater, a newspaper, stores and saloon, and immenses hoisting works (Angel, 1881, p. 443; Molinelli, 1879, p. 20).

RUBY HILL TUNNEL
Located on W side of Fish Creek Range about 3½ mi. S of Ruby Hill. In 1920, 1,070 tons of silver, gold and lead ore was mined and valued at $10,784 (Nolan, 1962; Roberts et al., 1967, table 14).

Sandula Shaft, see ISANDULA SHAFT

SECRET CANYON
Is a deeply eroded drainage heading in the S part of the Eureka District and and trends SE to Dale Canyon. Hague (1892, p. 109) describes the significance of the name this way:

> No one overlooking Secret Canyon from any high point in the country would understand the appropriateness of the appellation; its true significance is recognized only when approached from the south. The course of the present drainage channel follows the trend of the shales until nearly opposite the southern end of Roundtop Peak, when instead of maintaining its direction along the line of shales ...it turns suddenly, follows a narrow defile obliquely through the ridge of Hamburg limestone...

SECRET CANYON ROAD
Ascends Windfall Canyon and crosses a divide E of Prospect Peak where it descends into Secret Canyon.

SEVENTY SIX MINE
Site of the first discovery of ore in the Eureka District in 1864 and is located about 1½ mi. S of Eureka in New York Canyon. From 1881-1892, 162 tons of silver, gold and lead ore was mined valued at $10,900 (Nolan, 1962; Roberts et al., 1967, table 14).

SILVER CONNER SHAFT
Near crest of Fish Creek Range 1.8 mi. N of Prospect Peak. The gold and silver workingstotal more than four mi. The mine was worked from 1877-1921 when 5,937 tons of ore was mined and valued at $167,132. The property was owned by J.B. McNaughton in 1937 (Nolan, 1962; Roberts et al., 1967, table 14; Vanderburg, 1938, p. 42).

SILVER LICK MINE
Located 0.75 mi. NW of Adams Hill.

Snow Cavern, see CONNORS CAVE

SPRING RIDGE, 7605 ft.
This 1¼ mi. long ridge is located E of Windfall Canyon, S of Cherry Spring.

SPRING VALLEY, SPRING VALLEY CANYON
These features between the Mountain Boy and Fish Creek ranges limits the W boundary of the Eureka Mining District.

STERLING TUNNEL
Located ½ mi. due N of Diamond Mine.

The Idaho Mine, see EUREKA HOLLY MINE

TARGET HILL, 7240 ft.
This mountain with twin summits is located one mi. SW of Eureka. The southern point is the highest and the N point is called Purple Mountain.

T.L. SJAFT
Located about 1.3 mi. N of Adams Hill. During 1935, Thayer Lindsley looked over Nevada mining districts and liked what he saw at Eureka. Lindsley sent out geologists to study the area and ore was found at relatively shallow depth. The decision to sink the T.L. Shaft was reached in December 1953 and was named in honor of Thayer Lindsley, president of Eureka Corp. Ltd. The shaft was started March 16, 1954 and abandoned in 1958. During that time 30,000 tons of silver, gold and lead ore was mined and valued at $1,650,000 (Eureka Corp. Ltd,, 1955; Johnson, 1958; Nolan, 1962, p. 63-64; personal commun., 1984; Roberts et al., 1967).

TWIN HOOSAC TUNNEL
Is located on the NE side of Hoosac Mountain.

UNCLE SAM TUNNEL
Located in New York Canyon about ½ mi. E of Diamond Tunnel. The Uncle Sam Consolidated Tunnel was patented November 1877 by F.J. Schneider and W.C. Harrington. From 1922-1923, 171 tons of silver, gold and lead was mined and valued at $6,521.

WABASH TUNNEL
Silver, gold and lead prospect located 0.10 mi. NW of Silver Conner Shaft.

WALES SHAFT
Silver, gold and lead prospect located about 0.6 mi. NW of Adams Hill.

WEST SIDE MINE, WEST SIDE RAVINE
Located on the N side of Adams Hill.

WILLIAMS MINE
Just W of Fish Creek Range summit, 1.75 mi. N of Prospect Peak.

WILLIAMSBURGH MINE

Located on the S end of Mineral Point. The Williamsburgh claim was patented April 1877 by Samuel Copper et al. From 1876-1894, 4,654 tons of silver, gold and lead was mined and valued at $116,069 (Nolan, 1962; Roberts et al., 1967, table 14).

WINDFALL CANYON

Heads between Hoosac Mountain and Prospect Peak and trends NE to Eureka Canyon.

WINDFALL MINE

Located at the head of Windfall Canyon 1.25 mi. E of Prospect Peak. Gold was discovered here in 1904 by Eugene Geraty while sagehen hunting. The mine consists of a 540-ft. shaft with 7,000 ft. of workings. E.H. Snyder and associates owned the property in 1937. From 1908-1916, 65,132 tons of gold was valued at $349,428 (Nolan, 1962).

ZULU CANYON

A feature draining the E side of Mineral Hill.

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EUREKA HISTORICAL BUILDING AND ARCHAEOLOGICAL PROJECT

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