A History of TONOPAH, NEVADA A History of TONOPAH, NEVADA

Robert D. McCracken

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A History of Tonopah, Nevada by Robert D. McCracken

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Library of Congress Catalog Card Number: 90-060551 ISBN: 1-878138-52-9 Designed by Paul Cirac, White Sage Studios, Virginia City, Nevada Printed in the United States of America To my father, Robert G. McCracken, and all the other miners who worked underground in Nye County

To the Metscher brothers for their tireless efforts to under-stand and preserve Nevada history

In appreciation for their unwavering support and encouragement for the Nye County Town History Project:

Nye County Commissioners Robert "Bobby" N. Revert Joe S. Garcia, Jr. Richard L. Carver Barbara J. Raper

and Nye County Planning Consultant Stephen T. Bradhurst, Jr.

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Preface

Historians generally consider the year 1890 as the close of the American frontier. By then, most of the western United States had been settled, ranches and farms developed, communities established, and roads and railroads constructed. The mining boomtowns, based on the lure of the overnight riches from newly developed lodes, were but a memory.

Although Nevada was granted statehood in 1864, examination of any map of the state from the late 1800s shows that although much of the state was mapped and its geographical features named, a vast region—stretching from Belmont south to the Las Vegas meadows, comprising most of Nye County—remained largely unsettled and unmapped. In 1890 most of southcentral Nevada remained very much a frontier, and it continued to be so for at least another twenty years.

The great mining booms at Tonopah (1900), Goldfield (1902), and Rhyolite (1904) represent the last major flowerings of what might be called the Old West. Consequently, southcentral Nevada, notably Nye County—perhaps more than any other region of the West—remains close to the American frontier. In a real sense, a significant part of the frontier can still be found there. It exists in the attitudes, values, lifestyles, and memories of residents. The frontier-like character of the area is also visible in the relatively undisturbed condition of the natural environment, most of it essentially untouched by humans.

Aware of Nye County's close ties to our nation's frontier past and the scarcity of written sources on local history (especially after about 1920), the Nye County Board of Commissioners initiated the Nye County Town History Project (NCTHP) in 1987. The NCTHP is an effort to systematically collect and preserve the history of Nye County. The centerpiece of the NCTHP is a large set of interviews conducted with individuals who had knowledge of local history. The interviews provide a composite view of community and county history, revealing the flow of life and events for a part of Nevada that has heretofore been largely neglected by historians. Each interview was recorded, transcribed, and then edited lightly to preserve the language and speech patterns of those interviewed. All oral history interviews have been printed on acid-free paper and bound and archived in Nye County libraries, Special Collections in the James R. Dickinson Library at the University of Nevada, Las Vegas, and at other archival sites located throughout Nevada.

Collection of the oral histories has been accompanied by the assembling of a set of photographs depicting each community's history. These pictures have been obtained from participants in the oral history interviews and other present and past Nye County residents. Complete sets of these photographs have been archived along with the oral histories.

The oral histories and photo collections, as well as written sources, served as the basis for the preparation of this volume on Tonopah history. It is one of a series on the history of all major Nye County communities.

In a real sense this volume, like the others in the NCTHP series, is the result of a community effort. Before the oral interviews were conducted, a number of local residents provided advice on which community members had lived in the area the longest, possessed and recalled information not available to others, and were available and willing to participate. Because of time and budgetary constraints, many highly qualified persons were not interviewed.

Following the interviews, the participants gave even more of their time and energy: They elaborated upon and clarified points made during the taped interviews; they went through family albums and identified photographs; and they located books, dates, family records, and so forth. During the preparation of this manuscript, a number of community members were contacted, sometimes repeatedly (if asked, some would probably readily admit that they felt pestered), to answer questions that arose during the writing and editing of the manuscript. Moreover, once the manuscript was in more or less final form, each individual who was discussed for more than a paragraph or two in the text was provided with a copy of his or her portion of the text and was asked to check that portion for errors. Appropriate changes were then made.

Once that stage was completed, several individuals in the Tonopah area were asked to review the entire manuscript for errors of omission and commission. At each stage, this qualitycontrol process resulted in the elimination of factual errors and raised our confidence in the validity of the contents.

The author's training as an anthropologist, not a historian (although the difference between the disciplines is often probably less than some might suppose), likely has something to do with the community approach taken in the preparation of this volume. It also may contribute to the focus on the details of individuals and their families as opposed to a description of residents and their communities. Perhaps this volume, as well as a concern with variability among individuals and their contribution to a community, reflects an "ethnographic," as opposed to a "historical," perspective on local history. In the author's view, there is no such thing as "the history" of a community; there are many histories of a community. A community's history is like a sunrise—the colors are determined by a multitude of factors, such as the time of year, weather, and point of view. This history of Tonopah was greatly determined by the input of those who helped produce it. If others had participated, both the subjects treated and the relative emphasis the subjects received would have been, at least, somewhat different. Many basic facts would, of course, remain much the same-names, dates, and locations of events. But the focus, the details illustrating how facts and human beings come together, would have been different. History is, and always will remain, sensitive to perspective and impressionistic, in the finest and most beautiful sense of the word.

A shorter, generously illustrated (with more than 60 photographs) companion to this volume, titled Tonopah: The Greatest, the Richest, and the Best Mining Camp in the World, is also available through Nye County Press. Virtually all text contained in that volume was obtained from this longer history. Readers who are interested in a pictorial, less detailed account should consult that work.

I hope readers enjoy this history of Tonopah, Nevada. Tonopah is part frontier, part modern; part yesterday, part tomorrow. Situated in the high desert on some of the most beautiful real estate in the world, it was one of the most notable mining camps in history. If not "The Greatest, the Richest and the Best Mining Camp in the World," as it was described in the Tonopah Bonanza on April 29, 1905, it was certainly in the running for that title.

Acknowledgments

This volume was produced under the Nye County Town History Project, initiated by the Nye County Board of Commissioners. Appreciation goes to Chairman Joe S. Garcia, Jr., Robert "Bobby" N. Revert, and Pat Mankins; Mr. Revert and Mr. Garcia, in particular, showed deep interest and unyielding support for the project from its inception. Thanks also go to current commissioners Richard L. Carver and Barbara J. Raper, who have since joined Mr. Revert on the board and who have continued the project with enthusiastic support. Stephen T. Bradhurst, Jr., planning consultant for Nye County, gave unwavering support and advocacy, provided advice and input regarding the conduct of the research, and constantly served as a sounding board as production problems were worked out. This volume would never have been possible without the enthusiastic support of the Nye County commissioners and Mr. Bradhurst.

Thanks go to the participants of the Nye County Town History Project, especially those from Tonopah, who kindly provided much of the information; thanks, also, to residents from Tonopah and throughout southern Nevada—too numerous to mention by name—who provided assistance and historical information.

Jean Charney and Jean Stoess did the word processing and, along with Gary Roberts, Maire Hayes, and Jodie Hansen, provided editorial comments, review, and suggestions. Alice Levine and Michelle Starika edited several drafts of the manuscript and contributed measurably to this volume's scholarship and readability. Alice Levine also served as production consultant, and Michelle Starika prepared the index. Paul Cirac, who was raised in central Nevada, was responsible for design and layout. Gretchen Loeffler and Bambi McCracken assisted in numerous secretarial and clerical duties.

William J. Metscher, president of the Central Nevada Historical Society, who probably knows more about Tonopah history than any other individual, kindly critiqued several drafts of the manuscript; his assistance and support have been invaluable. Albert N. Bradshaw, Norman Coombs, Don B. Potts, Jeanne Potts, Edward R. Slavin, and Solan Terrell also made thoughtful comments and were among those who graciously answered many questions. Kevin Rafferty and Lynda Blair, from the University of Nevada, Las Vegas, Environmental Research Center, provided helpful suggestions on the section concerning the archaeology of Native Americans in the Tonopah area; Margaret J. Waski, with the Tonopah Resource Area, U.S.D.I., Bureau of Land Management, also provided advice on archaeology. Phillip Earl of the Nevada Historical Society contributed valuable support and criticism throughout, and Tom King at the Oral History Program of the University of Nevada, Reno, served as consulting oral historian. Susan Jarvis of Special Collections, James R. Dickinson Library, University of Nevada, Las Vegas, assisted greatly with research conducted at that institution. Much deserved thanks are extended to all these persons.

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R. D. M.

CHAPTER 1

Prologue: The Land and Early Inhabitants

In 1906, a pioneering geologist, Professor Arthur Lakes, visited the Tonopah area and in an article he wrote for Mines and Minerals, he described its volcanic past (Lakes, 1906:554). His descriptions and illustrations are a good place to begin a discussion of Tonopah history.

Volcanic Past

Tonopah has been the site, the professor suggests, of not one, but many volcanic eruptions. The eruptions came from ore magma that, at successive periods, had different chemical and mineral compositions. The country rock of Tonopah was originally granite overlain by Paleozoic limestones. Andesite and, later, rhyolite and dacite lavas erupted through fissures in these rocks. The later eruptions produced volcanoes, and the remnants of their congealed throats and necks are now prominent peaks in the neighborhood. One old volcanic throat is Heller Butte. The volcanoes erupted in a fresh-water lake and soon produced islands. Many of the eruptions were probably violent, and dust and stones were shot high into the air and fell into the waters and solidified, becoming volcanic tuffs The ancient lakebeds now surround the bases of the peaks and contain remains of numerous microscopic organisms (Lakes, 1906:554).

The lake itself had been formed when the earth's crust in the area sank because of "the continued drain on under-ground material poured out on the surface by the volcanic eruptions" (Lakes [quoting Spun] 1906:554). The collapse of large blocks of earth produced a myriad of faults and breaks. Most of the faults are visible only in underground workings, or occasionally as abrupt cliffs, scarps or benches, or zigzag ridges on the surface. Other faults were caused by eruptions pushing up through older formations. Following the eruptions the region was doubtless "a seething mass of vapors, gases, and hot springs issuing from the fissures." These solutions altered the rocks below, separating and concentrating the "magma metals and vein materials which were deposited in the fractures, and so the veins were formed" (Lakes, 1906:554). And thus the fabulous deposit of silver and gold at Tonopah came into being.

Geography of the Tonopah Area

Nye County, a key-hole shaped area in southcentral Nevada, is characterized by basin and range topography featuring nearly parallel mountain ranges separated by intervening plains. It is the largest county in the state, with 18,294 square miles encompassing more than 16 percent of the entire state (Berg, 1942:3). Nye County is the third largest county in the United States, extending 240 airline miles from southeast to northwest (Kral, 1951:1). High mountain ranges in the north include the Toiyabe Range and the Toquima Range, with Big Smoky Valley between the two. The highest point in the Toiyabe Range is Arc Dome, elevation 11,775 feet, and the highest point in the Toquimas is Mount Jefferson, with an elevation of 11,807 feet (Berg, 1942:1). The Reese River Valley lies on the west side of the Toiyabes, bordered on the west by the Shoshone Range, where Ione is located. Reese River heads near Arc Dome and in wet seasons it flows north to the Humboldt River. To the east of the Toquima Range lie the Monitor and Ralston valleys, sometimes called Upper and Lower Ralston. Monitor Valley is bordered on the east by the Monitor Range. Belmont is located among low mountains dividing Monitor and Ralston valleys. Typical streams of the Monitors are Pine, Mosquito, and Barley creeks. Streams in Smoky Valley include Twin Rivers and Kingston (Berg, 1942:3).

Tonopah is located in the San Antonio Mountains, which lie to the south of the Toiyabe Range. Lone Mountain is a solitary high point standing in the valley immediately west of Tonopah. About 40 miles east of Tonopah lies the Kawich Range, and east of that is the Reveille Range. The east side of the Reveille Range is bordered by Railroad Valley, which is bordered on its east by the Grant Range and the Quinn Canyon Mountains. A prominent geographical feature in central Nye County, lying southeast of Goldfield, is Stonewall Mountain. Paiute Mesa lies in the southcentral part of the county, currently on restricted ground occupied by the Nevada Test Site. In the southern part of Nye County, Beatty is located in the Bullfrog Hills; and the Funeral Mountains, southeast of Beatty, lie on the border between Nye County and California. The Charleston Mountains in Clark County form the eastern margin of the Pahrump Valley, which lies south of Beatty and the neighboring Amargosa Valley.

Eight Ages of Tonopah

The history of the Tonopah area can be divided into eight periods. In the first, from about 10,000 years ago to about A.D. 800, the area was occupied by Pre-Archaic and Archaic Indian populations. During period two, from about A.D. 800 to the third decade of the nineteenth century, the area was inhabited by Western Shoshone Indians. The arrival of the first whites marks the third period, which includes exploration by individuals such as John C. Fremont and perhaps Peter Skene Ogden; this era also includes the development of mineral resources in the surrounding area, including Silver Peak, the San Antonio district, the Reese River Valley and the Toiyabe and Toquima mountains prior to 1900. Period four of the Tonopah area's history began in 1900 with Jim Butler's discovery of silver at the present site of Tonopah and lasted until about 1908, when the effects of the Panic of 1907 were felt. Despite the economic downturn between 1908 and 1910, a time of steady mining production prevailed through the 1920s, making the fifth period. Leasing in the mines spanned the years from about 1930 until the start of construction of the Tonopah Army Air Base at the beginning of World War II, the sixth period in Tonopah's history. The rebirth of Tonopah brought about by the construction of the air base is the seventh period; it lasted through the end of World War II, when the air base was closed and economic decline followed in the early 1950s. Prosperity returned in the middle 1950s with increased activity on the Nevada Test Site and the Tonopah Test Range, marking the eighth and final period. This government-based economic prosperity remained strong through the 1960s and 1970s, when it was complemented by a dramatic increase in mining in the region, including the development of the Anaconda Molybdenum Mine north of Tonopah in the early 1980s and the development of other major mining properties in outlying areas such as Round Mountain, Candelaria, and Gabbs. Tourism has also become increasingly important to Tonopah during this period. (These time periods are based on a model suggested by W. Metscher [19871.)

The First Inhabitants

There is little solid evidence of human beings in the New World before about 13,000 years ago (Lewin, 1989:1140). Prior to that time, much of the North American continent was covered by two massive, collateral sheets of ice, each up to 7500 feet thick. The intensity of this ice age pulsated over time, reaching peaks at about 65,000 and 18,000 years ago, and ended dramatically about 12,000 to 9000 years ago. At their maxima, the ice sheets had incorporated so much of the planet's water that the level of the oceans fell by 300 or more feet, creating a land bridge between Asia and Alaska known as Beringia. It has long been assumed that humans first came from the Old World to the New World by crossing this land bridge. There are no signs of humans in northeast Asia until about 25,000 years ago, which is indirect evidence that humans could not have crossed much before that time (Lewin, 1987a:1230-1231).

After crossing Beringia, the first human beings to occupy North America probably moved southward to the northern plains along a corridor between the two giant ice sheets: the Cordilleran Ice Sheet, which covered what is now western Canada, and the Laurentide Ice Sheet, which covered all of the eastern four-fifths of Canada, Greenland, and much of the northern part of what is now the United States. Some of the earliest entrants may well have been members of a culture we call the Clovis people, after a particular kind of fluted stone projectile point (popularly known as an "arrow head"). En-countering an animal and plant world that had never known the presence of man, the first entrants are believed to have undergone an unprecedented population explosion and dispersion. In a matter of a few thousand years, the Clovis people are thought to have expanded throughout much of the New World, from Canada to the most southern stretches of South America. They are known to have hunted big game such as mammoths and mastodons because their projectile points are often found associated with the remains of these beasts in western North America (Lewin, 1987a:1231). Many researchers believe that the entry of man into the New World and the subsequent population explosion led directly to the extinction of numerous species of large New World mammals; during this period 90 percent of the large mammal species inhabiting the continent, some 70 in all, became extinct (Lewin, 1987a:1231). There is evidence that early big game hunters were in the Tonopah area—their fluted projectile points have been found in the Mud Lake area (Brooks, 1988; Tuohy, 1968; Campbell and Campbell, 1940).

Tonopah lies within what geographers call the Great Basin region, an immense area of 400,000 square miles extending between the Sierra Nevada and the Rocky Mountains, including all of Nevada and Utah, much of western Colorado, and portions of southern Oregon, Idaho, and Wyoming, in addition to eastern California, northern Arizona, and New Mexico (D'Azevedo, 1986:1). (There is confusion about the term Great Basin, which sometimes is used to refer to a smaller area centered in Nevada, with interior drainage of streams and rivers into remnant ice age lakes and playas [D'Azevedo, 1986:6].) The Great Basin region is arid to semiarid and the basic topography is described as basin and range, with roughly parallel mountain ranges and long desert basins that tend to run north and south (D'Azevedo, 1986:6), resembling, as one early geographer put it, an "army of caterpillars crawling toward Mexico" (Elliott, 1984:3).

The Great Basin region has not been an abundant environment for human beings for many thousands of years. By necessity, inhabitants have been restricted by its often harsh demands. The presence of man in the area for the past several millennia has provided a natural laboratory for the study of the relationship of man's society to his surroundings. (See Madsen and O'Connell, 1982 for discussion of this research.)

Researchers often divide the Great Basin into subregions, including the northern, southern, eastern, and western areas. For purposes of the study of its archaeology and native American occupants, the Tonopah area is said to lie in the western region, which includes most of Nevada and part of California along the east side of the Sierra Nevada. The western region is further subdivided, with Tonopah lying in the southern margin of the central Great Basin, which encompasses most of the center of the state of Nevada. The central sub region of the western Great Basin has the highest average elevation of the entire Great Basin, with valley floors over 5500 feet above sea level and mountains typically reaching above 10,000 feet. In the north of the central sub region, sagebrush is the dominant plant species; in the south, shadscale dominates. Pinion and juniper are found at middle elevations (Elston, 1986:135-136).

The archaeological history of the Tonopah area is divided into two major epochs—the Pre-Archaic and the Archaic (Elston, 1986:137; see Figure 1 from Elston, 1986, p. 135). The Pre-Archaic period in the Tonopah area began about 10,000 years ago and lasted until about 6000 years ago, at which time the Archaic period began. The Archaic has three subdivisions: Early Archaic (6000-1500 B.c.); Middle Archaic (1500 B.C.-A.D. 500); and Late Archaic (A.D. 500-A.D. 1800).

Epochs in archaeological history are defined in terms of changes in survival strategies used by the inhabitants of the area; these changes are determined by the study of archaeological remains. There are a few buried archaeological sites in the western Great Basin that represent Pre-Archaic people, but most Pre-Archaic remains are found on the surface. The stone implements of the Pre-Archaic people, including large knives, projectile points with ground edges, crescent-shaped objects, gravers, punches, choppers, and several types of scrapers, resemble the big-game hunting implements of the early inhabitants of the Great Plains far more than do the implements of the subsequent peoples of the Great Basin. Such implements are often found near the marshy deltas of streams feeding shallow lakes, including Mud Lake south of Tonopah. The Pre-Archaic people probably hunted big game, including extinct species such as mammoths and mastodons, and also utilized smaller animals; they likely consumed "lacustrine-marsh plant foods such as cattail shoots, pollen, and green seeds" (Elston, 1986:137). It is thought that they were nomadic, that they did not construct permanent structures or store food, and that they did not grind seeds. This lifestyle was made possible by the cooler and more moist conditions that prevailed at the time (Weide, 1982).

During the Archaic period, there were great changes in the lives of the early inhabitants of central Nevada. Settlement patterns changed; people adopted a home range or a sequence of home ranges varying with the seasons—winter camps, seasonal base camps, work sites, and so forth. People were probably sedentary in the winter, building substantial shelters and storage facilities. Archaic peoples participated in game drives and ambushes using rock walls, lines of cairns, or brush fences. During the Archaic period we find the first rock art, which may have been related to hunting cults or perhaps served to mark territory (Elston, 1986:138).

The Early Archaic phase was accompanied by a warming and drying trend in climate (Elston, 1986:138). It resulted in the shrinkage or disappearance of most lakes and marshes (Young, 1987:13). Strange as it may seem, researchers believe that the pinon-juniper woodlands, so much a part of the present environment, probably did not appear in the western Great Basin until about 4000 B.c. (Elston, 1986:138). The arrival of the pinon pine in central Nevada provided a new food source for the inhabitants. It is at this time that we notice inhabitants adopting a more diverse food base, including the processing (i.e., grinding with manos and metates) and storing of seeds. Food and equipment were stored in caves and rock shelters. The projectile points from this era are small and were used with the atlatl (spear thrower). Projectile points were smaller and less specialized than in the Pre-Archaic phase (Elston, 1986:138).

Remains of the Early Archaic peoples of the Tonopah area are found in the Toquima Mountains and in Reese River Valley and Monitor Valley (Elston, 1986:138). Here the first subphase within the Early Archaic subdivision is the Clipper Gap phase, which lasted from 3500 to 2500 B.C. It is defined by the presence of Triple T projectile points, which are wide, large, and concave in form (Burke and Furnis, 1987:10). The second part of the Early Archaic subdivision, lasting from 2500 to 1500 B.C., is known as the Devil's Gate phase (Burke and Furnis, 1987:10). This phase is distinguished by projectile points termed Gatecliff, Gypsum, Elko Contrasting Stem, and Pinto. The abundance of Gatecliff projectile points in the Reese River and Monitor valleys suggests greater numbers of people inhabited the area then than during previous centuries (Burke and Furnis, 1987:10).

The Middle Archaic subdivision began about 1500 B.C. and lasted until about A.D. 500, according to Burke and Furnis (1987:10). Elston, however, says the Middle Archaic began about 2000 B.C. (1986:141). The climate during this period was cool and moist; some describe it as neoglacial. It has been suggested that this cool, moist climate made food more readily available to the residents of central Nevada through the formation of meadows, marshes, and shallow lakes in locations where they had not previously existed (Elston, 1986:141). Archaeological sites for the period are distinguished by the remains of large animals, including mountain sheep, antelope, deer, bison, and elk, as well as Elko series projectile points. Although big game hunting was important, remains of smaller animals, particularly rabbits, are found in greater abundance than previously (Young, 1987:15). During the Reveille phase, which lasted from 1500 B.C. to A.D. 500, obsidian and marine shell beads make their first appearance in archaeological remains (Burke and Furnis, 1987:10). Farther north such artifacts as meadow mouse skin blankets, feathered tule duck decoys, and polychrome painted wooden "owl" effigies have been found, along with stone sculpture accompanying a burial from this period (Elston, 1986:143).

The Late Archaic subdivision, lasting from A.D. 500 to historic times, was accompanied by a mild warming and drying trend. Atlatl darts were replaced by the bow and arrow, and projectile points became smaller and lighter (Elston, 1986:145). Pottery was introduced after about A.D. 1100. Plant-processing equipment became more elaborate and abundant, and a wider variety of foods from a number of ecozones were utilized. Plant foods and small game, especially rabbits, were the order of the day, with a reduction in the use of large game. Many of these changes may have also been produced by an increase in population (Elston, 1986:145-146). House size, settlement size, and sedentism increased during this period, and greater reliance on the use of pine nuts is evident, anticipating the culture of the Western Shoshone Indians who occupied the central Nevada area at the time of white contact (Elston, 1986:146). The Underdown phase of the Late Archaic lasted from A.D. 500 to A.D. 1300 and is notable for the decline in the presence of projectile points compared to the Reveille phase of the Middle Archaic. The Yankee Blade phase ex-tended from A.D. 1300 to European contact times and is distinguished by increased emphasis on pinon nuts and villages concentrated in the valley floors. However, there was a residential base camp at Alta Toquima Village, high on Mount Jefferson (Burke and Furnis, 1987:11). This indicates there might have been a greater use of resources found at higher elevations than there had been before (Young, 1987:15).

It is thought that there were about 1000 languages spoken in the New World when Columbus arrived; about 600 survive today (Lewin, 1987b:1232). A controversial but interesting hypothesis, based on the work of an eminent linguist, J. H. Greenberg, suggests that there were three independent language groups that entered the New World with the settlers from Asia, each at different times (Lewin, 1987b:1232). The first language group likely came with the initial migrants and some of their successors over a period of centuries. This suggested ancient linguistic stock is called Amerind and is thought to have affinities with language families in Africa, Europe, Asia, Australia, and Oceania. The hypothesis suggests that there are some 11 subgroups of Amerind, which are found throughout South America and much of North America (Lewin, 1987b:1232). The next language to arrive was NaDene, which is said to be closely linked to languages in the Old World, including Sino-Tibetan, North Caucasian, and Basque. Na-Dene languages are spoken mainly in the northwestern part of North America and by the Navajo and Apache in the southwest United States. The last language to arrive in the New World is represented by Aleut-Eskimo, which is found in the northern peripheries of the New World. The Aleut-Eskimo languages are said to be most closely related to Uralic, Altaic, Ainu, Gilyak, Japanese, Korean, and, interestingly enough, Indo-European, the language family that includes English (Lewin, 1987b:1232).

Many researchers believe that the Western Shoshone Indians, residents of the Tonopah area when Europeans arrived, first migrated into the area approximately 1000 years ago. The Western Shoshone speak a variety of Central Numic languages, a family composed of Panamint, Shoshone, and Comanche. Central Numic is a branch of the Uto-Aztecan language family, spoken by a number of Indian groups not only in the Great Basin but also in the American Southwest, California, northern Mexico, and Central America. These same re-searchers believe that the homeland of the Numic language is somewhere in southeastern California, perhaps around Death Valley, and that Numic speakers first entered the Great Basin about 1000 years ago and in some fashion replaced the existing occupants (Thomas, 1982a:165-166). Other researchers, however, believe that the ancestors of the Numic speakers were living in the Great Basin 10,000 years ago and attained the distribution found in 1830 about 1000 years ago (Rafferty and Blair, 1984).

The Western Shoshone Indians

When Europeans first arrived in the Tonopah area (certainly in 1827, and perhaps earlier) they encountered people who had been living there for at least 1000 years. The Western Shoshone employed a markedly diverse strategy for existing in the central Great Basin,

one which utilized a wide variety of foods. They were what anthropologists call hunters and gatherers. The basic social unit was the family, and family clusters foraged for food in small groups from the spring through the fall (Thomas et al., 1986:266). Plants were the basis of the Shoshone economic system; nuts and other seeds were the mainstay of the diet. Seeds were knocked loose, or seed heads were cut and tied into bunches. Small seeds, including pine (pinon) nuts, were transported in twined carrying baskets, and baskets coated with pine pitch were used to transport water. Long hooked poles were frequently used to pull down pine cones, and digging sticks were used for unearthing roots. It has been estimated that a typical Western Shoshone family of four could gather approximately 1200 pounds of pine nuts each autumn. This amount would have lasted a family about four months. Families are said to have been able to gather several bushels in a day's time (Thomas et al., 1986:266). In the spring and summer, families tended to move to where the seeds were most plentiful.

During the winters the Shoshone tended to occupy traditional winter villages, especially in the Reese River, Ruby, Spring and Big Smoky valleys, where resources were fairly abundant. Such "villages," however, did not have permanent structures. In the more marginal areas, such as the Kawich Mountains, winter quarters might have been located where the pinons were most productive. When the winter stores of foods were exhausted, people relied on edible green plants, which ripened early in the lowlands. By summer they moved to where seeds and berries were ripe in the valleys and low foothills. Late summer and fall was the time for collecting pine nuts. Excess foods were stored, and caches of food were placed within several days' walk of the winter villages (Thomas et al., 1986:266-267).

In addition to plant foods, the Western Shoshone relied upon hunting. Bighorn sheep were important; in the summer their movements were monitored and then, with the aid of dogs, they were ambushed. When fall came, hunters would intercept the bighorn from behind rock walls and hunting blinds. During the winter, the sheep were taken on a "simple encounter" basis. Antelope were the second most important animal, followed by deer (Thomas et al., 1986:267). Rabbits were also important and were hunted in communal drives involving men and women. Burrowing rodents, including pocket gophers and ground squirrels, were either flooded or smoked out or dug out with rodent skewers. The Western Shoshone also hunted dove, mockingbird, sage hen, quail, and—less frequently—owl, hawk, and crow. When available, large black Mormon crickets in swarms were utilized (Thomas et al., 1986:267-268).

The typical winter hut, which provided shelter for a family of six, would consist of a light frame covered with slabs of bark and surrounded with a tier of stones to keep the supports firmly planted. The Kawich Mountain Shoshone constructed dome-shaped residences for both summer and winter. Temporary houses were virtually universal among the Western Shoshone (Thomas et al., 1986:268).

Clothing varied according to age, sex, and the individual hunter's ability (Thomas et al., 1986:269). Children often went naked. Even in subzero temperatures clothing was often scarce. A sewed robe, most often made of rabbit skin, was the most common protection against the cold. Bighorn, antelope, and deer hides were also worn. Women preferred long gowns of skin in the winter, and when skins were scarce they wore skirts of bark or grass. A successful hunter wore a breechclout of fur or twined bark but preferred garments tailored from tanned hides. Facial tattooing, using wood charcoal as pigment, was especially common among young adults. Mineral

pigment, mixed with bone marrow, was applied to face and body. The ears of both sexes were often pierced (Thomas et al., 1986:269).

The Western Shoshone manufactured a wide variety of baskets, which the women used for seed gathering (Thomas et al., 1986:269). Labor was divided according to sex, with the women gathering plants and the men hunting. Women "owned" the seed harvest and were responsible for the welfare of the winter residence (Thomas et al., 1986:278). Birth and female puberty rites were important, and death entailed considerable ritual activity (Thomas et al., 1986:270). Bodies of the dead were treated variably—sometimes cremated, sometimes abandoned or burned in their dwellings. In mountain areas they were often buried in rockslides or talus slopes (Thomas et al., 1986:270-271).

In their religion, the Western Shoshone engaged in a direct relationship with the supernatural. There was no formal priesthood, but supernatural powers could be obtained through visions and dreams (Thomas et al., 1986:271). Ailments were treated with plants, including 52 different plant remedies for "colds," 57 for venereal diseases, 44 for "swellings," 34 for diarrhea, 37 for rheumatism, and 48 for various stomach complaints (Thomas et al., 1986:272).

The social organization of the Western Shoshone has been described as "the inevitable response to areas of meager resources, low population density, and an annual cycle of nomadism" (Thomas et al., 1986:275; quoting Steward, 1970). Families usually belonged to local geographic districts, often focusing around a valley or cluster of winter villages. A group was frequently named for a distinctive geographic feature or prominent local food resource. Local groups were neither "bands" nor "tribes" in the strict anthropological sense, and membership within the groups fluctuated. Groups that occupied areas of abundance, such as the Reese River Valley, tended to be more stable in membership than those in areas such as the Kawich Mountains, where resources were less predictable. No territorial limits were recognized and people foraged from area to area. Marriages created strong bonds between families. Divorce was common, with many adults marrying several times. Residence after marriage was variable, and a good hunter could take more than one wife. Warfare prior to the arrival of whites was uncommon, although killing of individuals, especially strangers, did occur (Thomas et al., 1986:276-277).

Within the Tonopah area, Western Shoshone camps existed at Stonewall Mountain; Breen Creek, Horse Canyon, and Rose's Spring on the west side of the Kawich Range; the Reveille Mill on the east side of the Kawich; Stone Cabin; Warm Springs; Tybo; Hot Creek; Twin Springs; Moray; Duck-water; Darrough's Hot Springs in Big Smoky Valley; Peavine Creek; and at other localities, especially at numerous sites on the west side of the Toiyabe Range and the east side of the Shoshone Mountains along the Reese River Valley (Steward, 1970:101-102).

Between 15 and 20 families resided in the Kawich Mountains in the late nineteenth century. These families ranged over an area of more than 2000 square miles (Steward, 1970:111). Pine nuts were gathered in the Kawich Mountains; when they were scarce there, collection took place in the Monitor Range, east of Belmont, and even in the Silver Peak Mountains near Lida. In November, after the pine nut harvest, the Kawich Mountain people usually assembled in Cactus Flat to drive rabbits. Communal antelope drives were directed by a

shaman (an individual thought to possess supernatural powers) (Steward, 1970:113). A festival was held during the pine nut harvest wherever the harvest was good (Steward, 1970:112).

An individual named Kawatc functioned as a kind of village chief to the Kawich Mountain group during the mid-nineteenth century. He directed festivals, pine nut trips, and possibly rabbit drives. Kawatc's influence was extended with the mining boom at Belmont beginning in 1865, when the community acquired a large number of Shoshone (Steward, 1970:113).

Indian Life After European Contact

The arrival of Europeans in the Western Shoshone territories following the discovery of the famed Comstock Lode in western Nevada, as well as discoveries in the Reese River Valley and the Toiyabe and Toquima mountains a few years later, severely disrupted the traditional way of life for the Western Shoshone. Mining led to loss of land, conflicts over water, disappearance of game, and the logging of pinion trees for charcoal production, mine timbers, posts, and fuel. Traditional seed-collecting areas were sometimes plowed under. Streams deteriorated or were polluted by the mines, and tailings spread over once-productive lands. The development of communities encouraged farming and livestock grazing close to the mines. The arrival of railroads expanded the market availability of farming and ranching activities. All these changes produced disruptions in the traditional economic activities of the native Americans (Hanes, 1982:205-206). Hanes has noted (1982:206), "As the mining and ranching interests expanded, the Indian peoples around the state responded in large part by forming settlements on the outskirts of mining camps, railroad towns and farming communities or by attaching themselves to particular ranches." Traditional Indian activities were abandoned: Men hauled and chopped firewood, sold pine nuts and fish, hauled water, dug irrigation ditches, worked as loggers, plowed fields, hunted rabbits for bounty, or hunted large game commercially. Women worked as laundresses, maids, and kitchen helpers (Hanes, 1982:206).

Conflicts between Indians and whites sometimes occurred, and the government responded by establishing treaties and setting aside reserves of land for the Indians. However, the government did not always keep its promises regarding the reserves (Hanes, 1982:207). Moreover, large numbers of Indians refused to settle on the reserves during the latter part of the nineteenth century, preferring to maintain their dispersed residential style and staying close to their ancestral lands (Hanes, 1982:209). Native American populations reached a low in the last years of the nineteenth century due primarily to malnourishment and the ravages of European diseases introduced over the previous decades (Hanes, 1982:210).

CHAPTER 2

Exploration, Statehood, and Settlement

Early Explorers

In 1826, jedediah Smith became the first white man on record to travel overland to California (Reeder, 1966:19). He made his way down the Colorado River along Nevada's southern border (Fletcher, 1980:31). On the return leg of his journey in May 1827, after being the first white man to cross the Sierra Nevada (Morgan, 1953:210), he entered the present state of Nevada just south of Walker Lake, and

moved between the Gabbs Valley and Pilot Ranges, around the southern end of the Shoshone and Toiyabe Ranges, and crossed Big Smoky Valley just south of Peavine Creek. He followed a well-marked Indian trail across Big Smoky Valley... then crossed the southern tip of the Toquima Range directly east from Manhattan... camped for two nights, June 7 and 8, near the site of Belmont (Thomas, 1982b:7-8; see also Fletcher's 1980 map and Morgan's 1953 map).

The Canadian trapper-explorer Peter Skene Ogden was probably the second white known to enter what is now Nye County and the Tonopah area. As a young man, Ogden was employed as a clerk for the Northwest Fur Trading Company. In 1821 it merged with the Hudson's Bay Company, with headquarters at Fort Vancouver on the Columbia River. Ogden became leader of the company's Snake Country Expedition. As leader, he became the first white man to travel down and record the Humboldt River. In his 1829-1830 expedition, Ogden followed the Humboldt River downstream to the Humboldt Sink, then south to the Carson Sink and on to the Walker River. South of Walker Lake the expedition traveled "parallel to the present Nevada-California border, eventually reaching the Colorado River drainage basin and the Gulf of California before heading back to Oregon" (Funk, 1982:7L). Cline states that the expedition

traveled through desert valleys flanked by high, arid mountains. They noted that the sagebrush of the north gave way to the more desert species; creosote bush and Joshua trees now dotted the hills and bordered the white, alkaline-dried bed. They were probably traveling parallel to what is now the boundary between California and Nevada, and perhaps they passed through what has become the Las Vegas Bombing and Gunnery Range (Cline, 1974:93).

Peter Ogden later wrote of this trip across the Nevada desert:

There were times when we tasted no food, and were unable to discover water for several days together; without wood, we keenly felt the cold; wanting grass, our horses were reduced to great weakness, so that many of them died, on whose emaciated carcasses we were

constrained to satisfy the intolerable craving of our hunger, and as a last resort, to quench our thirst with their blood (Cline, 1974:91-93).

by Antonio Armijo crossed the Pahrump Valley in southern Nye County on the way from the Las Vegas Meadows to southern California, establishing an alternate route on the "Old Spanish Trail" (Warren, 1974).

In May 1832 a well-financed fur-trapping expedition set out from St. Louis under the direction of Captain Benjamin Eulalie de Bonneville, on leave from the U.S. Army (Fletcher, 1980:65-66). Captain Bonneville's chief lieutenant was Joseph Walker. When the party was north of the Great Salt Lake, Walker and about 40 men left to search for beaver west of the lake. On their return trip, they crossed the Sierra Nevada at an opening later named Walker Pass and strayed into a barren area west of the present town of Hawthorne, eventually moving northward (Hulse, 1981:37-39). Hulse's map (1981:33) shows Walker following a route northward that may have crossed the northwest corner of Nye County, perhaps in the vicinity of Gabbs.

John C. Fremont crossed southern Nevada on three occasions, each time entering Nye County (see map, Egan, 1977:22). In 1843, on his second expedition, Fremont traveled to the Pacific Ocean by way of the Columbia River Basin, ending up in southern California (Hulse, 1981:41-43). He returned in 1844 by way of the Old Spanish Trail, which took him through the Pahrump Valley in Nye County and on to the Las Vegas Meadows (Hulse, 1981:44).

In 1845, on his third expedition, Fremont crossed the desert west of the Great Salt Lake, then split his party (Noren, 1982:7L). One group followed the Humboldt River while "Fremont and ten men crossed the Ruby Mountains, veering southward and then northward to Walker's Lake to rendezvous with the others" (Noren, 1982:7L). Taking this course, Fremont traveled down the Great Smoky Valley in November 1845. Fremont is said to have given the valley the name Big Smoky because of the blue haze that resembled smoke hanging over the valley and surrounding mountains, especially in the fall (Berg, 1942:13). On his way through the valley, Fremont marked San Antonio Peak, Hot Springs, Twin Rivers, and Smoky Creek. On November 14 he camped at a small creek that he called Basin Creek, later known as Big Smoky Creek, and Kingston. On November 16, Fremont camped at a boiling hot springs now known as Darrough's Hot Springs (Berg, 1942:13). The local Indians are said to have been afraid of Fremont and his men; most remained hidden in the hills—the few who ventured near were given candy sticks, calico, beads, and food (Berg, 1942:14). Fremont is reported to have broken his thermometer testing the heat of Darrough's Hot Springs, which has since been found to register 242° Fahrenheit (Berg, 1942:14). Fremont continued south down Smoky Valley and camped near Peavine Creek on the night of November 17. Then he headed west over the mountains, probably taking the route later followed by the old road from Tonopah to Sodaville. He camped at a spring in the pass east of Sodaville (probably what is now known as Summit Springs), then went on to Walker Lake, where he joined the remainder of his party and continued westward (Berg, 1942:14).

In 1854, Lieutenant Colonel Edward Jenner Steptoe and pioneer Mormon settler John Reese explored the Reese River while searching for a more direct route across the Great Basin (Thomas, 1982b:10). In 1859 Captain James H. Simpson, commissioned by the United States Army Topographical Corps, attempted to find a military route between Camp Floyd, Utah, and the Carson Valley; he explored Monitor Valley and the Toquima and Toiyabe ranges (Thomas, 1982b:11-13). Simpson's explorations took him south of the Humboldt route across the Reese River Valley, which John Reese in 1854 had named New River, but which Simpson named after Reese (Berg, 1942:15-18). The route delineated by Simpson cut 300 miles off the Humboldt route and was later followed by the Pony Express, the Overland Mail, and the Lincoln Highway (Berg, 1942:15).

Statehood for Nevada; Nye County Is Created

The territory comprising the states of Arizona, California, Nevada, New Mexico, and Utah, and portions of Colorado and Wyoming was acquired from Mexico in 1848 through the Treaty of Guadalupe-Hidalgo (Mottaz, 1978:27). All but the southernmost portion of the present state of Nevada became a part of the Utah Territory in the Compromise of 1850; the southern tip was included in the New Mexico Territory. Counties in the Utah and New Mexico territories were created in 1852, with what is presently Nye County being included in Millard, Iron, and Washington counties in the Utah Territory and Taos and Rio Arriba counties in the New Mexico Territory (Mottaz, 1978:26-27).

The Territory of Nevada was established by Congress on March 2, 1861. On February 16, 1864, Nye County was established from a portion of Esmeralda County, with the county seat at Ione. Nevada became a state on October 31, 1864, by presidential proclamation (Mottaz, 1978:35). In 1866 the eastern boundary of the state of Nevada was moved eastward to its present location and the southern boundary was extended to the Colorado River (Mottaz, 1978:36-37). The boundaries of Nye County were moved eastward to the state line and included the present area of northern Lincoln County and southern White Pine County. On February 6, 1867, the county seat of Nye County was moved to Belmont, reflecting changing mining conditions in the county (Mottaz, 1978:37). In February 1875, the present boundaries of Nye County were established (Mottaz, 1978:41).

In 1909 there was an unsuccessful effort by members of the state legislature to have the southern part of Nye County established as Bullfrog County (Mottaz, 1978:43). Nearly 80 years later, in 1987, the Nevada State Legislature designated an unoccupied 144-square-mile portion of southern Nye County near Yucca Mountain southeast of Beatty as Bullfrog County. This designation was prompted by special interests in the state that were attempting to gain control of anticipated funds associated with the projected construction of a high-level nuclear waste repository at Yucca Mountain. It was declared unconstitutional the same year.

Although it may be a bit of an exaggeration, it is said that prior to 1863 there were no white settlers in the area now encompassed by Nye County. In the spring of 1864, investigations into proposals to establish a new county reported a white population between 1000 and 1500. The U.S. Census of 1870 showed a population of 1631 whites. In 1890 the population was 1290 and in 1900, 1140. The population in 1910 was 7513; in 1920 it was 6504. The large increase in population between 1900 and 1910 is attributable to mining activity in Tonopah and the surrounding area (Nevada Works Projects Administration, 1940:22). In 1985, Nye County's population was 13,385 ("Special Census of Nye County," 1985:1).

Early Gold and Silver Rushes

John Marshall discovered gold at Sutter's Mill near Sacramento, California, in January 1848. One month later, the United States Senate accepted the Treaty of Guadalupe-Hidalgo, which ended the Mexican War and ceded all Mexican territory north of the Gila River to the United States. These two events combined to send thousands of immigrants across the Great Basin toward California, the new Eldorado. Prospectors fanned out, searching for precious metals in surrounding mountains; some were successful. Small com-munities were established near the new discoveries and along the routes leading west (Elliott, 1984:47-49).

California-bound immigrants discovered gold in a ravine about 40 miles east of the California border in 1850 (Elliott, 1984:50-51). Gold Canyon, the site of the discovery, supported between 100 and 180 miners between 1850 and 1859 (Elliott, 1984:61). In June 1859, the fabulous Comstock Lode was discovered in Six Mile Canyon, not far to the north. This discovery led to the "rush to Washoe" and the formation of a number of rough communities, including Gold Hill, Virginia City, and Silver City (Elliott, 1984:64-65). Prospectors from the Comstock found minerals in other areas to the southeast and east (Elliott, 1984:100). In 1862 and 1863, discoveries in the Reese River area brought in many settlers and led to the founding of the town of Austin (Keeler, 1913:960). Prospectors worked south from Austin, and in 1863 silver was discovered; the Union mining district and the town of Ione were established. Because Ione was located more than 100 miles away from the Esmeralda County seat at Aurora, a new county seat was needed, and so Nye County was carved out of Esmeralda County in 1864 (Berg, 1942:19).

Further prospecting to the south of Austin led to discoveries in Ophir Canyon in the Toiyabe Range and the development of the Twin Rivers mining district in 1863 (Berg, 1942:21). Discoveries of gold south of Ophir in the Toiyabes led to the founding of the town of Hercules in 1865 (Berg, 1942:25). Gold was discovered at Kingston Canyon in the Toiyabes, located in what is now Lander County, in the early 1860s (Berg, 1942:27). In 1867 silver was found in the Northumberland (Toquima) Mountains, and Learnville was founded 38 miles north of Belmont (Berg, 1942:31). Angel reports that the Toiyabe district, 15 miles north of San Antonio Station, was organized in 1878, following discoveries in 1876 by three individuals—Messrs. Nichol, Wallmer, and Terrill. Ore, which in some mines ran as high as \$300 a ton, was milled at Jefferson (Angel, 1881 [19581:519).

In 1865 prospectors discovered silver in Monitor Valley about 100 miles south of Austin. The new town was first called Silver Bend, but the name was soon changed to Belmont (Berg, 1942:33). In 1867, over the protestations of the residents of Ione, the town of Belmont became the Nye County seat (Nevada Works Projects Administration, 1940:7). In 1876, a two-story brick courthouse was constructed in Belmont. Telegraph lines from Eureka reached the town that September (Berg, 1942:35).

Discoveries were made in the Spanish Belt district in the Shoshone Mountains west of Belmont in 1867. The community of Barcelona City, 7 miles from Belmont, was established in 1874 (Berg, 1942:40-41). In 1874 Tybo was a lively place, and there was even talk that it would become the county seat, replacing Belmont (Berg, 1942:36).

Silver was discovered in Jefferson Canyon in 1866, but it was about five years before it was worked (Berg, 1942:47). At first the district was called Greenild, but in 1874 the name was

changed to Jefferson. In 1874 a toll road was constructed over Jefferson Summit from Belmont, and by July there were 125 men in Jefferson.

The San Antonio district covers the northern portion of the San Antonio Mountains, adjoining the Tonopah district on the north. The district was discovered in 1863 by a party of Mexicans and organized the next year (Kral, 1951:157). In an interview conducted with Joe Clifford of Stone Cabin, Kral reports (1951:157) that Clifford found evidence of Mexican diggings dating back to 1854, 1.5 miles southeast of Liberty in the San Antonio district. Solan Terrell of Tonopah reported seeing in the 1940s an old stone arrasta in the vicinity, believed to be of Mexican origin (Terrell, 1988). Joe Clifford found an old hewn cedar board, marked "NWC ESTRELLA" at the Spanish Mine, 1.5 miles southeast of Liberty (Kral, 1951:158). Kral also notes evidence that early French-Canadian trappers may have ventured as far south as Nye County well before the 1860s (Kral, 1951:3). It is reported that, in 1864, 200 miners were working there, with ore being shipped to a mill 100 miles to the north on the Reese River side of the Toiyabes (Berg, 1942:42). Rich ore was present, yielding over \$600 a ton, but wood and water were scarce. In 1865, a 10-stamp mill was built 12 miles away at San Antonio Station, then called Indian Springs, and a 4-stamp mill was built in 1867 (Berg, 1942:42; Angel, 1881 [19581:518).

The Liberty Mine was the principal known producer of the San Antonio district (Berg, 1942:43). In 1886, leasers hauled their ore to the Prussian Mill in Jefferson Canyon because there were no longer mills in the San Antonio area. Kral states that between 1867 and 1873 the Liberty Mine produced \$112,167 from 852 tons of ore; between 1910 and 1912 it was reported to have produced about \$500,000. Manganese properties are situated south of the Liberty Mine and molybdenum properties to the north (Kral, 1951:158-159). In 1901 the Liberty Mine is said to have had pillars of ore assaying as high as \$400 a ton and others at \$119 (Berg, 1942:44). Knowledge of the Liberty Mine encouraged Jim Butler to prospect in the locality, leading eventually to his discoveries at Tonopah. A brick chimney remained at San Antonio until after the discovery of Tonopah, when it was dismantled and the bricks re-used (Berg, 1942:43).

Ore was discovered in the Reveille Range about 60 miles east of Tonopah in August 1866 by Indian Jim, who showed it to 0. Arnold, M. D. Fairchild, and Alonzo Monroe. A mining district was organized, and it was named in honor of the Reese River Reveille, Austin's newspaper. Fifty mines were eventually developed in the district, and ore was shipped to Austin and other locations. A town developed containing two stores, a blacksmith shop, a boardinghouse, a post office and 150 inhabitants. In 1869 a 5-stamp mill and a 10-stamp mill were built 12 miles to the west, on the west side of the Reveille Valley where water was abundant. The mills operated only a short time, owing to the company's failure. In 1875 the 10-stamp mill was put into operation again and functioned at intervals for four years, producing approximately \$1.5 million worth of bullion (Angel, 1881 [19581:526; Lincoln, 1923:179; Kral, 1951:142).

The mines and town were abandoned in the spring of 1880. In all there were 950 locations in the district and the ores were free-milling—that is, no chemicals were needed to separate the values from the waste rock. The Gila, with a shaft 460 feet deep and a tunnel 1000 feet long, was the major mine. Ore in the district averaged \$75 to \$100 per ton, but in many instances it yielded as much as \$1500. Freight was hauled from Eureka, a distance of 125 miles, and cost 2.5 cents per pound. Angel states that as of 1881 there were five or six cattle ranches in the vicinity of the mining district, but that agricultural interests were not flourishing. In 1881,

the town of Reveille consisted of one hotel, a saloon, a post office, butcher shop, livery stable, a blacksmith shop, and about 30 inhabitants (Angel, 1881 [19581:526).

Ranching in the Tonopah Area Before 1900

In its earlier years, Nye (County) was considered a fine grazing country and thousands of cattle grazed annually upon the bunch grass and white sage which grew profusely over large portions of the county, the white sage in particular consisting of very valuable winter feed (Keeler, 1913:962).

Before 1900, there were a number of ranching operations in the Tonopah region. Thomas (1982b:24) says, "By 1870, fifteen homesteads appeared on the Nye County tax rolls (for Monitor Valley), totaling 1680 deeded acres." When the mining camps failed in the late 1870s, Hulse reports:

the livestock industry did not suffer greatly because it did not depend to any large extent on the Nevada market. (In some cases ranchers who produced hay and grain or vegetables for sale in the mining towns did lose business.) By the early 1880s, stockmen were shipping their animals by rail to Omaha and San Francisco (Hulse, 1981:158).

Ranching began in the Smoky Valley about 1863. The first settlers were H. Robinson and William Shay. Berg suggests that they may have built the stone house at Darrough's Hot Springs on which "1863" has been carved in the foundation rock. In 1868, the Robinson brothers owned the Twin Rivers Ranch situated at the confluence of north and south Twin Rivers. The ranch reportedly included between 1000 and 1500 acres, with 150 acres planted in grain. By 1878 H. Hawkins owned the hot springs and people were encouraged to bathe in the warm water. James Darrough acquired the springs not long afterward (Berg, 1942:56-57).

Basically, ranches were established wherever the Toiyabe or Toquima ranges produced enough water. Several ranchers drilled artesian wells to supplement the streams. Soil in most parts of the valley was considered good, and by 1881 there were 13 ranches in the Big Smoky Valley (Berg, 1942:57). Berg also notes (1942:59) that Angel reported 18 ranches and 50 inhabitants in Monitor Valley in 1881. In that year the Reese River Valley is said to have had 18 ranches (Berg, 1942:59). The Reese River Valley is higher than the Smoky Valley and both the Reese River and Monitor valleys receive more snow, so vegetable and fruit crops are more likely to freeze.

In 1874, 3000 acres in Nye County were being irrigated. Fruit trees, especially apples, pears, and plums, were being successfully cultivated. Angel reported (1881 [1958]:515) that farming and grazing interests "held their own" despite the decline in mining in the county after about 1874.

In 1881 Angel wrote,

A few years ago Nye was considered a fine grazing country, but its feed supply has been nearly destroyed by large herds of stock which have been subsisted within its boundaries for several seasons past. During the last two years, more than 10,000 head of cattle have been driven away (1881 [1958]:515).

Winter feed was white sage, which the cattle did not eat until a heavy frost, preferring it to anything else. Little grain was reported as being raised during this period, with the exception of barley. Alfalfa was reported to do well (Angel, 1881 [1958]:515).

Beginning about 1880, the state of Nevada began to experience a general economic decline: Mining was depressed for about 20 years, and ranchers had difficulty recovering from the severe winter of 1889-1890 (Hulse, 1981:153-160). Between 1880 and 1900, Nevada's population declined from 62,000 to 42,000 (Hulse, 1981:152). This economic decline ended abruptly in 1900. As Elliott says,

The second series of mining rushes in Nevada was ushered in by the discoveries at Tonopah and Ely in 1900. These discoveries came at a time when the mining industry in Nevada was in the throes of a depression which many thought threatened the existence of the state.... Consequently, the news of the mining strikes in the early part of the twentieth century met with an eager reception, and for the next ten years mining discoveries followed one another in rapid succession until the entire southern and eastern parts of Nevada were alive with mining activities (Elliott, 1966:vii).

"In a sense," Hulse says (1981:176), "the Tonopah boom of 1900-1905 generated enthusiasm for prospecting as the Comstock discovery had done 40 years before. Nearly a hundred new camps were established..." For nearly 20 years, Tonopah was one of the west's leading producers of precious metals (Hulse, 1981:174). In southern Nevada, only Goldfield proved to be as important a town as Tonopah (Hulse, 1981:176). Gold was discovered in Goldfield in Esmeralda County in 1902 and in the Rhyolite/Beatty area in 1904 (Elliott, 1966).

CHAPTER 3 Silver and the Rise of Tonopah

Every mining camp was replete with tales of the near-miss of the lucky strike—the "one that got away." "I was inches away from a rich strike" or "I walked right over ground that later produced millions" were common laments. The rich silver ore in Tonopah literally stuck out of the ground, and any number of individuals were close and could have made the discovery that Jim Butler made in 1900.

The Search for Silver

Silver Peak, located about 30 miles southwest of Tonopah, was organized as a mining district in 1865, and there was an active post office there from 1866 to 1913 (Carlson, 1974:216). The town of Candelaria, 25 miles west of Tonopah, dates to 1875 and was a booming mining district in 1880 (Carlson, 1974:68). Prospectors at Silver Peak fanned out in all directions in search of fruitful signs of other mineral deposits. They were, of course, familiar with the sawtooth peak in the San Antonio Range, which separated Ralston Valley on the east and San Antonio Valley to the west. Although there were many passes across the San Antonio Range, the lowest and least rough took travelers along the base of Sawtooth Peak, now known as Mount Butler. There was an especially good trail connecting the station at Stone Cabin, about 40 miles east of Tonopah, and the cattle ranges along Lower Peavine Creek in the San Antonio Valley, extending westerly toward Silver Peak and Candelaria (Keeler, 1913:963-964).

Many cowboys and travelers must have seen the 300-yards-square outcropping on the trail through Sawtooth Pass (later known as Tonopah Pass), but it was black or brownish black and in southern Nevada such outcroppings typically ran high in iron and silica but low in everything else. The cowboys and prospectors must have ignored the black float and the black ledges, thinking the color was due to iron compounds rather than compounds of manganese and silver, the true coloring agents of the rock. Moreover, springs located 3 miles from the outcropping (later called Tonopah Springs) were known as a rendezvous for herders; many of them saw the ledges that ran east and west across the face of Mount Oddie down to the flat (Sawyer, 1953:1).

Sometime in the 1890s an old man from Silver Peak made several trips toward Sawtooth Peak and reported he had located some ledges of black quartz near its base. Many supposed that he must have made a valuable discovery, for he allowed no one to accompany him on these trips. He did not return from one of his trips and was never seen again. It is not known whether he died in the desert or whether he simply moved on to another, more attractive area. He was a close-mouthed individual, and he never discussed his plans. What little he did say, however, fits very closely with the ledges at Tonopah (Keeler, 1913:964).

An Indian known as Charlie Fishman was the next person to almost find Tonopah's fabulous treasure. Fishman is said to have told the assayer at the Silver Peak Mine that he knew the location of some "big, black quartz ledges." He said they looked good and that they might contain gold. Fishman was intelligent, knew the art of prospecting, and had made previous

prospecting trips on horseback. The assayer, known as "Van" to the whites and "Mr. Van" to the Indians, was interested in prospecting and encouraged it to the extent that his finances allowed. Van asked Fishman how long it would take to make a trip to examine the ledges for gold. Fishman replied that it would take two to three weeks if he had an outfit. The assayer supplied Fishman with a light wagon, a team of horses, and enough supplies for three weeks. The Indian said that he knew where water could be obtained. Van instructed Fishman to pan for gold along all the ledges; Fishman returned in approximately three weeks and reported that he had panned the ledges and gotten but one color (Keeler, 1913:964-965).

Unfortunately for both of them, Fishman failed to bring back any of the rock. He returned what was left of the grub-stake and disappeared. In 1901 Van paid a visit to the new discoveries at Tonopah. He had heard tales of the mineral wealth, the scores of teamsters and hundreds of horses, and the many leasers in the camp. He is said to have inspected the leases on Mizpah Hill and then to have crossed over to the Valley View Hill. As he stood on the edge of the first lease he came to on Valley View Hill, he looked down into an open cut where ore was being broken and spied Fishman drilling a hole with steel and a single jack. He called to the Indian and Fishman looked up, saying, "Hello, Mr. Van, how are you? This is the place where I found the black quartz." Without a word Van turned away, walked down the hill, hitched up his team and left Tonopah, never to return. So close, but so far away (Keeler, 1913:965).

Still others had their chances to discover Tonopah's silver. One spring in the late 1890s, Isador Sara, a Basque sheep-herder, drove a band of sheep along the Monitor and San Antonio ranges. Feed at the site of Tonopah was good, and springs between Heller Butte and Butler Mountain furnished plenty of water. The sheep camp was established at the present site of the State Bank Building and the sheep grazed on the slopes of Mizpah Hill. Sara noted the outcroppings as he watched the sheep. He broke off some samples, tied them in a handkerchief, and hung it on the side of the camp burro. When the weather turned warm and the springs dried up, it was necessary to move the sheep to other pastures. The samples in the handkerchief rubbed on the sides of the burro and wore a hole in the makeshift sample sack. Sara tried to tie them again, but the chaffing wore another hole and Sara became disgusted and threw the samples away. The samples had been obtained from the Mizpah and Valley View outcroppings (Keeler, 1913:965-966). Jim Cayhill, a resident of Smoky Valley, took samples from the ledges in 1898 but never had assays run (Sawyer, 1953:1).

Warren Averill Springs, located a short distance north of Tonopah, served as a rendezvous for herders for many years; those who camped there were probably familiar with the ledges at Sawtooth Pass. Warren Averill, an old freighter for whom the springs were named, wintered his oxen at the site for a period of years prior to 1900. Jim Butler later changed its name from Warren Averill Springs to Tonopah Springs, noting that the Indians used to designate the place by a Numic word that means "brushwater springs." In Shoshone, the word would be properly spelled lonobe-bah (Sawyer, 1953:1). More recently it has been suggested that the word should be tonobe-bah, as there is not an "1" in the Shoshone language at the beginning of words (Charney, 1988). Carlson notes:

The local Indian word tonopah has been interpreted as "hidden spring," "brush water spring," "greasewood spring," "little water" and "water brush," the last being accepted by old-timers in the area.... The name appears to mean "greasewood water (spring)" and to derive from either Shoshone (Central Numic) to-nuv, "greasewood," or Northern Paiute (Western Numic) to-nav, "greasewood," and pa, "water," in both dialects (1974:233-234).

The Big Strike!

The story of Jim Butler's discovery is well known and is only briefly reviewed here. Butler had come from California and established a ranch in Monitor Valley. He was married to a part-Shoshone woman named Belle. Fluent in Shoshone, he loved to talk to Indians (Keeler, 1913:966). In May 1900, leaving Belle at home and traveling alone, Butler ostensibly went to visit the Bell and Court discovery in the Klondike district, about 14 miles south of Tonopah, which had been established the previous year (Lincoln, 1923 [19821:75, 184; Keeler, 1913:966). Instead of heading straight down Ralston Valley to Mud Lake (then called Cactus Lake) to the west edge of the Klondike Hills and then across to the Bell and Court property, Butler crossed the San Antonio Mountains via a high, rough pass to Tonopah Springs and then over to Sawtooth Peak (Keeler, 1913:966).

Historians have since surmised that although Butler may have been interested in visiting Klondike he was also interested in prospecting and had a particular site in mind. Some believe that the Indians had told him of the ledges in Sawtooth Pass and that it was his intention from the beginning of the trip to check them out. Thus, the tale of Jim Butler camping in Sawtooth Pass and picking up a black stone to throw at his burro, then noting the unusual weight of the stone, is probably myth (Keeler, 1913:966). At any rate, Butler collected the samples on May 19, 1900 (Berg, 1942:63; Elliott, 1966:5).

Butler took samples from the ledge at Sawtooth Pass, later known as the Mizpah Vein, and continued on to South Klondike (Sawyer, 1953:2). There he offered assayer Frank Hicks an interest in the discovery if he would assay the samples. Hicks is said to have replied that he would not give a dollar for a thousand tons of such stuff and to have thrown the samples on the dump (Berg, 1942:64). Butler is reported to have shown the ore to several other people who also did not think much of it (Berg, 1942:64). On May 25,1900, Butler returned to Belmont by the same route, gathering more samples. Back in Belmont he showed them to the regulars at Wilse Brougher's store (Sawyer, 1953:2). Tasker L. Oddie was one of these, and he offered to have an assay made. Butler had no money, but his wife, Belle, offered Oddie an interest in the mine if the samples proved good. Oddie sent the samples to Walter Gayheart in Austin, who ran them and found them to be high in silver and gold. His assays ran from \$18 to \$600 per ton (Berg, 1942:64). Gayheart informed Oddie of the results and Oddie sent word to Butler (Sawyer, 1953:2).

Meanwhile Butler had returned to his ranch in Monitor Valley, where he ignored Oddie's urgent message for three weeks. Oddie sent copies of the assays by Indian runner to the ranch, but Butler was busy haying. When Butler did go to Belmont it was to concentrate on his official duties there as district attorney (Berg, 1942:64). In August 1900, Brougher and Oddie outfitted Jim and Belle Butler in Belmont and the couple returned to Sawtooth Pass to locate claims (Sawyer, 1953:2). News of the discovery had already leaked out, and there was a small rush to the Tonopah region before Butler and his wife returned in August (Berg, 1942:65). Because no one knew exactly where the samples had been obtained and Butler had not put up location notices, the valuable discoveries still had not been located. (If Butler had put up

location notices, the time allotted to do the necessary work to hold the ground would have expired and the claims would have been open for relocation [Berg, 1942:65].) The first claim located by Butler was the Desert Queen, followed by the Burro, while Mrs. Butler located the Mizpah, which proved to be the richest of all. In addition, they located the Valley View, Silver Top, Buckboard, and Red Plume (Berg, 1942:65). Interestingly, Butler found location monuments on the property surrounding the ledges, but they had partially fallen down, looked weathered, and were apparently old; he found no location notices (Keeler, 1913:964).

Attempts to develop the property began the second week in November when Wilse Brougher and Tasker Oddie accompanied the Butlers to the newly staked claims. Supplies consisted of mining materials, food, blankets, a water barrel, and a rickety wagon drawn by two old horses. As a testimony to their determination and hardiness, they brought neither tent nor stove (Sawyer, 1953:2). Initial operations were very primitive. Oddie was the youngest and most inexperienced in mining, and his duties were to haul water from Tonopah Springs, to make roads, and to tend the camp. A windlass was used in hoisting ore. Within a short time two tons of ore had been mined and hauled 50 miles to Belmont, where freighters took it another 50 miles to Austin. There it was transferred to the railroad for a trip to Salt Lake City. The returns were eagerly awaited, and all were delighted when they received a check for \$500 for the two tons. The funds enabled them to employ John Nay and John Humphrey to work in the mine, while a young Indian hauled water. Oddie spent his time on horseback carrying assays to and from Belmont. Since the partners had few funds, leasers were welcomed and encouraged (Sawyer, 1953:2-3).

Tonopah's First Cook

Until April 1901, Sadie Grieves, Belle Butler, and Charlotte Stimler were the only women in the Tonopah camp (Sawyer, 1953:7). Charlotte Stimler, known as Lottie Stimler Nay, has left an account of her first few months in Tonopah that graphically illustrates the hardships the first residents of Tonopah endured (Doughty, 1974).

Lottie Stimler was born and raised in Belmont and is said to have been "possessed of manners, schooling and genteel accomplishments" (Doughty, 1974:3). During the last years of the nineteenth century, Belmont mining had suffered a slow decline, and with the discovery at Tonopah, most Belmont residents decamped for the new community. Lottie's brother Harry left to cook for the miners employed by Butler, Brougher, and Oddie. Lottie became discontented; she was tired of the dreary, monotonous life in Belmont. She longed for the adventure of a new, exciting town, so she sent for a 14x15-foot tent, some cooking utensils and dishes and, with Harry's help, she left Belmont on January 25, 1901, for Tonopah camp (Doughty, 1974:3). At the camp, meals had been prepared over open fires and served to miners who squatted on the ground or sat on bedrolls, so there was

great rejoicing and a general holiday declared when Miss Stimler drove into camp on January 29, 1902 [sic; sources differ on the year, but it had to be 19011, with her two wagons loaded with groceries and furniture. All the men assisted in the work of setting up the tents. About noon the wind began to rage, but everyone worked on, hoping to make it possible to use the tent that night (Sawyer, 1953:7-8).

Of her new quarters, Stimler said:

I thought I had never seen such a horrid place as that tent: everything was so crowded, dusty and dirty, and the water wagon had failed to get into camp before dinnertime. My "white" dishes were put to immediate use, as was also my table and my new white oilcloth covers. When all the men came in from work, great was their surprise and delight to find a decent table at which they could all sit down together without discomfort, and the white dishes—how they enjoyed eating off of them, for they had used tin ones before.... That night at supper there were 30 men instead of about 15, as Miss Grieves and I had calculated; but fortunately I had cooked up a kettleful each of beans and sauerkraut that forenoon, and then we made biscuits and fried steak, and managed to "fill them up." The boys had had to fix the tents in such a hurry that the cold wind seemed to blow right through the dining room without stopping; and the men had a great time trying to keep the two lamps burning during the meal. But they were all good natured and seemed well pleased with the first supper (Doughty, 1974:3).

Stimler goes on to say, "About the second of February it began to snow and blow so furiously that within a few days the snow was three feet on the level and piled up behind our kitchen for five or six feet" (Doughty, 1974:3). With the storm Stimler's boarders increased to 40 and there was a scramble to get seats at the table nearest the fire. The storm, which lasted two weeks, brought most work in the camp to a halt (Doughty, 1974:4). At that time there were only two 12x14-foot frame buildings and about eight small tents in Tonopah. Some of the men were without overshoes or felt boots and made use of "the company's" ore sacks for boots to walk through the snow. Because bed was the only warm place in camp, most remained there in the morning until they were sure breakfast was ready; then they crowded tightly around the stove. Stimler notes that because the floor was dirt,

Our feet would almost freeze while standing and walking on the ice and mud, while waiting on the table. By bedtime Miss Grieves' shoes and mine would be so wet that they would freeze stiff during the night. We would have to thaw them out before we could put them on, next morning. The frost would come through the canvas of the tent and drop on us, and so we had to keep our heads covered during sleep. One night I woke and found my pillow covered with light snow. Our alarm clock would freeze and stop, so I put it under my pillow to keep it warm. There were so few of us and we had so much to do that we had to get up about 4:30 in the morning. We would not get to bed until 11:00 or after at night. Even when I got to bed, I could hardly sleep; every fierce gust of wind would almost blow the tent over. Nearly every morning some tent would blow down, its occupant buried in the snow. All he could do was to pull the canvas over him to protect himself till morning (Doughty, 1974:4).

When provisions ran low, all residents were glad to see the grub wagon. Even the sacks of potatoes on one wagon had frozen, but no one complained. In the middle of March the wind blew so hard that it broke the main scanting along the side of the tent. They thought they had the tent fixed, then:

When everything was secure, as they thought, they got about halfway across the street when the ridgepole broke in two.... The boy who helped me first braced himself against the door, to keep the whole front of the tent from blowing in, while I ran out to call the men back. Another day, our kitchen tent was torn and blown down, at dinner time. While the men were eating, one of us would stand and hold the pipe on the cookstove to keep it from blowing away. In spite of our efforts, it would slip off the stove, and the whole place filled with soot and smoke and ashes.

Finally the kitchen tent was ripped from top to bottom in several places; it scattered and upset everything except the stove (Doughty, 1974:5).

Lottie Stimler was not discouraged by the difficult conditions she first experienced in the new camp. Later she married her brother's partner, John E. Nay, and spent the chief part of her life in Tonopah (Doughty, 1974:5).

The Development of Tonopah

Butler and his partners were short the money needed to develop their claims, so blocks of promising ground were at first leased to miners. But it did not take long before more conventional methods of financing mining in Tonopah permanently changed the community. In mid-1901 Oscar A. Turner, a mining promoter from Grass Valley, California, arrived in town. He expressed an interest in buying property belonging to Jim Butler and his partners. Jim McQuillan ran assays for the camp and provided Turner with assay data on ore in the mines (Sawyer, 1953:12). Turner took an option on the properties for a price of \$336,000. Oddie received \$32,500 for his interests and presumably Gayheart received a like amount. The funds were drawn on John Woodside of the American Tobacco Company in Philadelphia. The Tonopah Mining Company was established, and a pattern was set for future mining operations in the area. The Tonopah Mining Company was incorporated in the state of Wyoming for 1 million shares at a par value of \$1 each. Very little of the stock was offered for sale in Nevada. Jim Butler had specified to the new owners that the leasers must be allowed to work their ground until December 31, 1901, at which time the ground would become the property of the Tonopah Mining Company. The miners worked hard for the next six months trying to dig out as much ore as possible before their leases expired. Oddie became manager of the new operation (Sawyer, 1953:12-13).

In early January 1902, a disease that writers have referred to as a "black plague" swept the community of Tonopah (Sawyer, 1953:14). Women did not contract the disease, but few of the men who got it recovered. It was probably pneumonia aggravated by breathing silica-laden dust in the mines. Silicosis weakens the lungs of those who have breathed in fine dust high in silica. The disease was to kill and cripple miners in the Tonopah mines by the hundreds in the years to come. The first epidemic ran its course in about a month. By mid-January, 17 men were dead (Sawyer, 1953:14). During the epidemic, residents became hysterical; outward-bound stage-coaches were packed with passengers, and many who could not secure rides walked all the way to Sodaville. By the time the epidemic was over there were only about 50 people in Tonopah. Unsanitary conditions in the camp (there was no orderly disposal of garbage) no doubt aggravated the epidemic (Sawyer, 1931:19; 1953:14). Transportation and freight hauling to and from Tonopah were difficult in the first years. Traders made the trip from Sodaville, located about 4 miles south of Mina on the Carson and Colorado Railroad, to Tonopah in two days. Stewart's Well was 15 miles out of Sodaville and was the first water stop. It was another 15 miles to the second stop, Crow Springs, where the traders would rest for the night. The last stop on the road to Tonopah was another 15 miles away at Desert Wells, later called Millers. There were large corrals and feed yards at each of the stops. Drivers carried their own blankets and slept under the wagons (Sawyer, 1953:11).

In 1904 a narrow-gauge railroad connecting Tonopah with Sodaville and the Carson and Colorado Railroad was constructed. On July 25, 1904, the first passenger train reached Tonopah. A major celebration commemorated the occasion (Myrick, 1962:241). By August 1905, the line was converted to standard gauge (Myrick, 1962:256). At first the railroad was called the Tonopah Railroad, but when it was merged with a line connecting Tonopah and Goldfield in the fall of 1905 it was renamed the Tonopah and Goldfield Railroad (Myrick, 1962:259). The T&G maintenance shops were originally in Tonopah, but they were moved to Goldfield after the Tonopah facility burned down in 1909 (Myrick, 1962:263). The railroad was extended to Bullfrog in 1907 and that leg was known as the Bullfrog Goldfield Railroad (Myrick, 1962:517). Borax Smith, whose line, the Tonopah and Tidewater Railroad, reached Beatty after Senator William Clark's Las Vegas and Tonopah Railroad, made an agreement to use the Bullfrog Goldfield tracks until 1914 (Myrick, 1962:526), when the Bullfrog Goldfield and the Las Vegas and Tonopah tracks between Goldfield and Beatty were merged (Myrick, 1962:527). The Las Vegas and Tonopah Railroad was abandoned in 1918, and the right-of-way was used for the highway between Las Vegas and Beatty. The Bullfrog Goldfield leg of the T&T operation was abandoned in January 1928 (Myrick, 1962:536), and the T&T Railroad running between Beatty and the Santa Fe tracks at Ludlow, California, was abandoned in June 1940 (Berg, 1942:79-81; Myrick, 1962:593). On October 15, 1947, the Tonopah and Goldfield Railroad was formally abandoned (Myrick, 1962:288).

Slow and Steady Growth

Unlike Rhyolite and other mining communities in the central Nevada area, Tonopah grew steadily and in an unfrenzied manner between 1900 and 1910. After Jim Butler sold out there was little opportunity in Tonopah to make a fortune through speculation, and promoters left the town for nearby boom camps. Tonopah was left, as one historian put it, "to develop solely in ratio to her ore production" (Sawyer, 1931:37).

Once Tonopah began to grow, the saloons, gambling houses, and red-light establishments became the focus of social life for most miners. Business deals were discussed and plans for the area's development were made in the saloons. Saloons were the leisure-time homes for probably the majority of single miners throughout the boom period and, after working hours, the only places where many operators or miners could be found (Elliott, 1966:49).

The majority of early arrivals came from neighboring towns, and each group formed a district or neighborhood of its own in Tonopah (which until 1905 was known as Butler City). The districts were Little Austin, New Sodaville, and Camp Belmont (Sawyer, 1931:18). The center of town was the intersection of Main Street and Brougher Avenue. Sawyer describes the town:

Looking down Main Street one saw a number of frame shacks scattered among the white canvas tents. The Butler office stood on the lots adjoining the present Nevada National Bank building; across Brougher Avenue Lathrop and Davis had a general merchandise store; next to them was the Tonopah Club. Henry Cutting had a real estate, notary and mining office and residence in a nearby cabin. The last wooden building on the side of the street was Henry Ramsey's saloon. On the right hand of Main Street Govan and Brougher's saloon occupied the site of the present Mizpah Hotel.... On Brougher Avenue, just back of this saloon, stood two tents that made up Stimler's restaurant. All of these buildings were old ... structures which had been hauled from Belmont and Candelaria. Tonopah had no hotel or lodging house until April, when a tent ... hotel was set up next to the Stimler tents. New comers, arriving without supplies or tents, laid their blankets on the floor of the saloon, or in some one's tent. When a woman came to camp a miner moved from his tent and loaned it to her until the arrival of her own outfit. Mrs. Butler, Miss Charlotte Stimler and Sadie Grieves were the only women in camp until April, 1901 (Sawyer, 1931:18-19).

Elliott states (1966:52) that as the town prospered, "the collection of dugouts, tents, and miscellaneous houses, lacking the conveniences of adequate water, fuel, and supplies, gave way" to a modern town of frame and stone buildings, daily newspapers, a telephone system, the Western Union telegraph, electric lights and power, a water and sewage disposal system, railroad, ice plants, modern hotels and restaurants and effective town government. A post office was established in 1901. A five-story building that housed a bank and various offices, with the top floors serving as apartments, was constructed diagonally across from the Mizpah (Berg, 1942:76).

Under the provisions of Nevada's Town Board Act of 1881, the commissioners established a town board government for Tonopah on July 7, 1905 (Elliott, 1966:58). Prior to that it had been governed as a mining district. Mass meetings of interested citizens were held as the occasion demanded so that problems could be addressed (Elliott, 1966:60-61). Health rules were enforced; property owners were required to keep their lots, alleys, and adjacent streets free of rubbish, and people were prevented from distributing unwholesome foods. There were standards for the construction and control of cesspools and privies and for the proper storage and care of water. Police protection was at first provided by unofficial groups who patrolled the town or by committees appointed at mass meetings. Later, constables and other law enforcement officials were employed (Elliott, 1966:63).

Fire protection was a continual problem for Tonopah in its early years. Destructive fires began in the spring of 1904. Fires in the summer of 1908 caused the town board to increase the fire department to three paid members in addition to the chief (Elliott, 1966:64). One blaze in 1908 caused \$150,000 worth of damage; flames were visible as far away as Goldfield and Coaldale (Berg, 1942:76).

Water companies were formed. The Tonopah Water Improvement Company was organized May 7, 1902. On August 28, 1902, the Tonopah Consolidated Water Company was established, followed by the Crystal Water Company on September 20, 1902. Water was obtained by these companies from nearby mountain springs and streams and from the wells in the valley floors (Elliott, 1966:46).

Tonopah passed many ordinances for the control of prostitution. An ordinance passed by the town board in 1915 stated that:

[It shall be] unlawful for public prostitutes or notoriously lewd or abandoned women to stand, sit, or frequent the sidewalks in front or near the premises they may occupy, or at the alleyway, door or gate of such premises, or to occupy the steps thereof, or accost, call or stop any person passing by, or to walk up or down the sidewalks, or to stroll about the city streets indecently attired, or in any other respects to behave in public so as to cause scandal or to disturb the peace and good morals of the people (Elliott, 1966:66-67).

Theaters were built for the latest stage shows and road productions. Dances soon became rather formal events, and people modeled themselves according to their perceptions of how people acted in San Francisco and Los Angeles. Ladies Aid Societies and Women's Improvement leagues were formed during the boom period; they pointed out the deficiencies of society and exerted pressure for better living conditions, sanitation, and such improvements as sidewalks and a paved main street (Elliott, 1966:55).

Baseball was the first sport to be organized in the camp; a Tonopah team competed with Goldfield as early as 1904 (Elliott, 1966:55). Gun clubs were organized, tennis courts were constructed, and bowling teams were formed. There was interest in horse racing. Boxing was popular and prize fights served as devices to publicize the town. The Fourth of July provided a climax for athletic events. There were speeches in abundance, races, boxing matches, baseball games, dances, a grand ball, and a "world championship" drilling contest. The automobile was an exclusive high-status item; owners formed automobile clubs and held races (Elliott, 1966:56-57).

The Nye County seat was moved to Tonopah from Belmont on May 1, 1905 (Elliott, 1966:60).
CHAPTER 4 Tonopah Takes Shape

The period from 1901 to 1907 was one of prosperity, but it was followed by three years of frustration and depression (Carpenter, 1953:58). In the fall of 1907, interest rates throughout the United States were rising and credit was tightening. On October 23, 1907, the Knickerbocker Trust of New York closed its doors (Lingenfelter, 1986:294).

The Panic of 1907

A financial panic swept the nation, and depositors rushed to banks demanding their funds. A depression followed. Little money was available for mining development and speculation. Many small mines closed and there was also a decline in mining camps in the Death Valley area (Lingenfelter, 1986:294). Strong banks refused to pay depositors, and weak banks folded. Banks that had loaned on stocks as security failed. Many companies in Tonopah failed, notably those dependent upon treasury stock sales to pay operation costs for development. Stores closed for lack of customers. Construction was halted on the new Mizpah Hotel building (Carpenter, 1953:58). There was widespread fear that the Tonopah mineral deposits were in fact shallow, as evidenced by the fact that the veins in the Tonopah Mining Company's Mizpah were impoverished below 700 feet (Carpenter, 1953:58-59). Growth in production in the Tonopah mines leveled off somewhat with the Panic of 1907, but the town weathered the storm (Carpenter, 1953:149). During the fall of 1910 there was a sudden expansion of mining activity in Tonopah, and the next 19 years were characterized by "steady production and general prosperity in Tonopah" (Carpenter, 1953:69). Activity declined precipitously in 1930 and never recovered to the level of the previous years. The peak production year for the town was 1918, when 622,364 tons of ore, valued at more than \$9 million, was produced (Carpenter, 1953:69 and Table, p. 149).

The Construction of the Mizpah Hotel

The first building to be constructed where the Mizpah Hotel presently stands was the Mizpah Saloon, which opened in June 1901 and promised to be "A place where at all times may be found the choicest of wines, liquors and cigars" (Gold, 1982). The Mizpah Saloon was a lively spot, but the booming silver camp soon outgrew it. In 1905, Nye County State Senator Wilson (Wilse) Brougher, his brother Henry Calvin (Cal) Brougher, and Robert B. Govan commissioned Morrill J. Curtiss, a prominent Reno architect, to design a three-story structure. The three backers were owners of the Tonopah Lumber Company and by the fall of 1905 that concern had built the largest building in town. It housed the Tonopah Banking Corporation as well as law, mining, and real estate firms, and it also served as a hotel. The building was made of granite obtained from the base of Mount Brougher and was known as the Brougher-Govan Block. It is the present-day Mizpah Hotel Annex (Rocha, 1979:3J).

Cal Brougher, Bob Govan, George Wingfield, and U.S. Senator George Nixon put up over \$200,000 for construction of the Mizpah Hotel. George W. Holesworth, who had recently

completed the State Bank and Trust Company building diagonally across the street from the Mizpah Saloon, was hired to construct the new building. In April 1907, the famous Mizpah Saloon, known as the Monte Carlo of Nevada, was moved to the south end of town and construction on the new hotel began that summer. But the Panic of 1907 dried up investment funds and work on the hotel was suspended. By January 1, 1908, the windows had been boarded up and it looked as if Tonopah had its own ghost hotel. But by mid-summer, work was resumed. On November 17, 1908, the grand opening of the Mizpah Hotel was held (Rocha, 1979:3J-4J). Upper stories were completed in phases; the third story was finished in August 1909 (Berg, 1942:76).

The hotel was equipped with "The finest oak furnishings, the most ornate fixtures, the latest in modern indoor conveniences, and huge plate-glass windows on the first floor." Half of the town's 10,000 residents thronged to the grand opening (Rocha, 1979:3J-4J). The Daily Bonanza wrote:

Suites, single rooms, rooms for private business meetings, baths, lavatories, steam, hot and cold water and electric and gas service, all are complete. Nor does the weary have to climb stairs, for an electric elevator runs from basement to garret, and should the guest desire, he can stroll into the office, state that he wants to be fed, bathed, and put into bed, and all these things will be attended to for him. The Mizpah is a credit to Tonopah and it eminently deserves a patronage which will enable it to maintain—and improve upon if possible—the high standard of excellence upon which it starts. Good Luck to the Mizpah (Rocha, 1979:4J).

In 1922, the Mizpah was leased to George R. Hickernall by Cal Brougher, and in 1930, Hickernall purchased it outright. In 1934, controlling interest was acquired by William Kennett, Sr., former clerk of the Nevada Supreme Court and Nye County assemblyman. Kennett and his wife, Catherine, operated the hotel until 1943, when they moved to Reno. In 1943, Charles and John Cavanaugh began acquiring interest in the hotel. Art Revert, a longtime Beatty businessman, managed the hotel for about six years during the 1940s (A. Revert, 1987). During World War II it provided housing for officers from the Tonopah Army Air Base. The Cavanaughs operated the hotel until 1954, when it was sold to Mr. and Mrs. George Hillard of Yuma, Arizona. In 1956, it was sold to Myron Stahl and Les E. Short. The brilliant neon sign atop the hotel was installed in October of that year (Rocha, 1979:4J).

In 1976, Frank E. Scott, president of a multi-million dollar construction company and builder of the glamorous Union Plaza Hotel in Las Vegas, purchased the Mizpah. Scott had fallen in love with the Mizpah 40 years earlier when traveling from Las Vegas to Yerington for a football game. Over the next three years he invested \$4 million to restore the hotel to its gleaming, Edwardian finery, and it reopened in 1979 (Toll, n.d.). In the early 1980s the hotel was acquired by William J. Allison and associates.

Legend has it that the Tonopah jail was once connected to the hotel and that Wyatt Earp served as sheriff for Tonopah. Neither of these claims is true, although Earp did reside in Tonopah for eight months in 1902. It is also said that the safe in the hotel, once used in the cashier pit, was at one time owned by Bernard Baruch. This is also not true. Though Baruch was a friend of George Wingfield, an investor in the Goldfield Consolidated Mines, and once visited Goldfield, he never lived in Nevada. There is also no evidence that his safe ended up in the hotel (Rocha, 1979:4J). Legend also has it that Howard Hughes married actress Jean Peters at the hotel (Gold, 1982). However, local authorities say this is apocryphal and that the couple was actually married by Justice of the Peace Tom McCulloch in LeRoy David's apartment at the L&L Motel in Tonopah (David, 1989).

The First Public Library

Tonopah's first library seems to have been a result of the first funeral in the community. John Randal Weeks, a new arrival in town, died suddenly and every effort was made to give him a decent burial. His brother George arrived in Tonopah too late for the funeral, but discussions with the town's citizens led him to suggest starting a public library. Upon his return to Colorado, he sent 100 bound volumes of best-sellers and classics to Tonopah. The books were housed in a portable building brought to Tonopah by Dr. A. L. Hudjens, a dentist. Mrs. Hudjens looked after the books and is thus considered the community's first librarian. Grace Roberts Moore took over librarian duties in 1902. However, as the boomtown grew, these facilities became inadequate (Wilson, n.d.).

The story of the founding of Tonopah's first official public library begins in the spring of 1904. At that time there were only two circulating libraries in the state of Nevada—one in Carson City and the other in Reno. Mrs. Hugh Brown went to pay a call upon Mrs. W. F. Towne, a new arrival. As the women talked, Mrs. Towne informed her guest of her great desire to establish a boy's club in Tonopah. Mrs. Brown confided that it was her great desire to establish a public library in the community. Mrs. Towne soon realized that it would not be feasible for her to bring her idea to fruition, so she decided to support Mrs. Brown's idea ("History of Tonopah Free Public Library," n.d.).

On Thanksgiving Day 1904, a town meeting devoted to the subject of establishing a library was held in the old Opera House. The Tonopah Mining Company donated a building site, and a fund-raising campaign was undertaken. Money for the library was raised through dances, sales, bazaars, and even a book social. The book social was held at the Towne residence and contributions of books poured in from as far away as San Francisco. One flim-flam promoter even promised 500 shares of stock in his Tonopah Home Mining Company, which the fund raisers never received and which became worthless when the promoter disappeared from town.

During the fund raising, Tasker Oddie donated \$100, and the Tonopah Mining Company provided \$1000. In all, about \$10,000 was raised. Even stones needed for construction of the building were donated. When the building was completed, several thousand dollars remained for maintenance and operation of the library ("History of Tonopah Free Public Library," n.d.).

Several years later the money was exhausted and it was necessary for Mrs. Brown to raise additional funds. Upon hearing that the library was broke, Tasker Oddie donated \$50 to tide them over for two weeks. The Tonopah Mining Company donated \$100 per month, with the promise of more if needed. The mining company kept its commitment until 1917, when Nye County assumed part of the responsibility for the library's finances. In the library's early years, Mrs. Brown, Mrs. Stock, and Mrs. Towne served as librarians on alternate days. In 1911 Mrs. Grace R. Moore, Mrs. Brown's mother, took on the job on a regular basis until she left town in 1918 ("History of Tonopah Free Public Library," n.d.).

Newspapers

Among the first businesses to be established in a new mining camp are the saloons and general stores. Not far behind in most camps are the newspapers. A newspaper served two functions in a mining community: It provided local residents and outsiders with news from the camp and the surrounding area, and it became a promotional organ for the community and its mines, a sort of self-appointed community booster.

In early 1901, Tasker Oddie called a mass meeting in Tonopah to raise funds for a printing plant. There was only one printer in the camp, William W. Booth, and he was elected to run the establishment. They raised \$600 for the purchase of a press, a stone, and two cases of type (Lingenfelter and Gash, 1984:240). Until March 1905, Tonopah and its post office were known as Butler, Nevada. (A post office was established in Tonopah April 10, 1901, but until March 3, 1905, the town was known as Butler. The name was changed to Tonopah on that date [Carlson, 1974:65] .) On Saturday, June 15,1901, Tonopah's first newspaper appeared on the streets as the weekly Bonanza from Butler, Nevada. A 12x14-foot shack moved from Candelaria was the Bonanza's office. On March 10, 1906, the paper became a daily. Booth remained editor of the Tonopah Bonanza until November 26, 1929, when the paper was purchased by Frank Garside of the Tonopah Daily Times and the two papers were merged (Lingenfelter and Gash, 1984:240).

The Tonopah Daily Times began publication December 1, 1915, with Frank Garside as editor and owner. It consisted of four pages of six columns each and appeared every day except Monday. Garside served as both editor and publisher of the Tonopah Times-Bonanza until February 4, 1933, when Clyde R. Terrell took over as editor. E. N. Richardson followed Terrell as editor on October 15, 1934; he was replaced by Ray and Virginia Germain on January 17, 1935. The Germains remained until February 2, 1945, when Clyde Terrell bought the paper and became sole editor and proprietor. The paper had reverted back to a weekly on April 2, 1943 (Lingenfelter and gash, 1984:242-244).

In about 1952, the paper was bought by Mr. and Mrs. Robert A. Crandall of the Goldfield News, and on January 4, 1957, the two papers were merged, becoming the Tonopah Times-Bonanza and Goldfield News. Mr. and Mrs. Ira N. Jacobson purchased the paper in 1958 and in 1961 Gerald A. Roberts became editor. In March 1975, William G. Roberts became editor and publisher, with Gerald Roberts serving as general manager (Lingenfelter and Gash, 1984:242-244).

The Tonopah Sun, the town's third paper, first appeared May 11, 1904. Editor Lindley C. Branson had an astute and enthusiastic approach to the news. The paper started out as a one-page affair, but Branson acquired new equipment and the Sun became a daily on January 10, 1905. Branson also established the Goldfield Sun and by the end of his first year he had twenty men on the payroll and two printing plants worth over \$10,000. Branson sold out February 13, 1910, and the paper ceased publication July 16,1910 (Lingenfelter and Gash, 1984:241).

The rise and fall of mining camps can almost be charted by the number of their newspapers and the frequency of publication. During its heyday, Tonopah had a number of other newspapers. The Tonopah Miner was founded by C. J. McDivitt and T. H. Eckles on June

20, 1902. The Miner was a prosperous newspaper for nearly 20 years before ceasing publication on November 5, 1921 (Lingenfelter and Gash, 1984:240-241).

The Tonopah Mining Reporter began publication on August 27, 1921, as a four-page paper that appeared every Friday. W. W. Booth of the Daily Bonanza published the Reporter, which ceased publication only weeks after the 1929 stock market crash. It was at this time that Booth also sold his Bonanza to Frank Garside of the Times (Lingenfelter and Gash, 1984:243). Other newspapers published in Tonopah included the Tonopah Nevadan (October 8, 1912-June 5, 1913); The Net (c. July 1918-c. November 1918); the Nevada Mining Record (May 15, 1926-November 16, 1929); the Nevada Mining Record and Reporter (November 23, 1929-May 14, 1932); the Bombing and Gunnery Range (September 12,1942-c. 1943); the Nevada Democratic Record (Nevada Record) (April 1962 +); and the Nevada Veteran's Journal (April 1966 +) (Lingenfelter and Gash, 1984:242-245). In the early 1980s a weekly paper was published for a short period (Terrell, 1988).

Nightlife

From its earliest days Tonopah has had an active nightlife. The bars always constituted one of the town's major social centers. Aside from the Mizpah Hotel, the Big Casino, which opened April 1905, was probably Tonopah's most famous establishment. It was located on the east side of Main Street between Oddie Avenue and Knapp Avenue. The Big Casino contained a restaurant, saloon, betting hall, and a dance hall (Rocha, 1987:19-20). Cribs for prostitutes were located on a balcony above the dance floor. Men paid to dance with women employed by the establishment, who also encouraged their partners to go to the bar and buy drinks (Slavin, 1989). The girls worked on commission and received 40 percent of all drinks they sold and 50 percent of all dance receipts (Rocha, 1987:19-20). Dance girls were not necessarily prostitutes; a man went to the balcony for sexual encounters with the latter (Slavin, 1989).

By 1907 the Big Casino boasted a small orchestra (Rocha, 1987:19-20). Entertainers were imported from San Francisco and were of a quality to equal Las Vegas today, remembers Ed Slavin, who sold newspapers in the Big Casino as a boy (1989). The Big Casino had direct wires to the major racetracks in the country and made book on important sporting events. It claimed to be the largest hurdy-gurdy house on the west coast. In 1907 it helped sponsor the Gans-Herman World Lightweight Championship fight on New Year's Day. The Big Casino was a lucrative operation until the state of Nevada enacted antigambling laws in 1910. With the loss of gambling, it fell on hard times and by 1913 was in financial trouble, a litigant in the federal courts. In August 1913, it went into receivership until settlements could be reached (Rocha, 1987:19-20).

This development, of course, meant that the federal government was in the business of operating a hurdy-gurdy house. A lovely young woman, newly arrived in town and destined for employment at the Big Casino, was asked how she liked her new boss. She stated, "I should worry! I'm working for the Government." The woman's optimism was unfounded, however, because in a few days the Nye County commissioners revoked the Big Casino's liquor license, ruling that it was a "public nuisance" and "detrimental to the peace and morals of the community" (Rocha, 1987:22).

Not long thereafter, the Big Casino was returned to its former management and it continued operation, but profits were smaller without legalized gambling. By 1920 the dance hall had been abandoned and the largest of Tonopah's "joints," as they were always called, had been converted into the Big Casino Hotel. On August 23, 1922, "the Monte Carlo of the Desert," famed in song and glorified in literature by Jack London, Rex Beach, and Robert Service, was destroyed in a \$75,000 fire, which razed the entire lower end of downtown north of Oddie Avenue ("Big Casino 1922 Fire is Recalled," 1942).

Tonopah's red-light district was bounded by Main Street and Knapp, Oddie, and Central avenues. There were two kinds of establishments in the district—bars and dance halls, and brothels. Old-timers in town say that during its heyday there might have been as many as 300 dance-hall girls and an equal number of prostitutes in the district (Anonymous, 1988). One long-term Tonopah resident, when asked what the town's nightlife was like during the 1920s, replied, "Tonopah doesn't have a nightlife now in comparison" (Skanovsky, 1987). Miners tended to be hard-living individuals; they worked hard in the mines and pursued their nighttime activities with equal vigor. Men would be seen on the streets at night in an inebriated state, barely able to walk, and yet the next day they could put in a shift at the mine with no hint of the previous night's activities (Skanovsky, 1987; Coombs, 1990).

During the 1920s, many of the establishments featured live music, often top groups from San Francisco and Reno. Free hors d'oeuvres and other food items were frequently available. A person could get a good sandwich of pork, beef, or turkey and a beer for 5 cents. Like so many business establishments in town, the bars and dance halls in the red-light district had their own tokens with which a patron could purchase goods and services. Tokens from one place were good at other shops and establishments in town, and were used as if they were cash. Most establishments' tokens came in 6-1/4 and 12-1/2 cent denominations, with the former substituting for a nickel and the latter for a dime. Thus, patrons received a bonus to encourage further purchases (W. Metscher, 1989). If a patron ordered a 5-cent beer and sandwich and paid for them with a dime, he would receive a 6-1/4-cent token in change, thus receiving a 1-1/4-cent bonus (W. Metscher, 1989). After the establishments folded and the tokens no longer had purchasing power, most townspeople threw them away. Many tokens ended up in the dump west of Tonopah, where some were retrieved years later by souvenir and artifact hunters (Skanovsky, 1987).

Although women in the red-light district were plentiful and many were beautiful and could promise a good time to anyone who could pay the price, there was always the risk of venereal disease. Syphilis and gonorrhea were not uncommon among red-light district patrons, and in that pre-antibiotic era the diseases were troublesome and dangerous. They often became chronic in the men who were unfortunate enough to contract them, and it was said that in the shower and change rooms at the mines one could see men whose genitals were missing or seriously deformed by venereal diseases (Coombs, 1990).

By the late 1930s economic activity in Tonopah was a shadow of its former self. Despite this decline, there were still more than a dozen bars and brothels in the red-light district. These included the Silver State Bar, Effie's Place, the Lucky Strike, Fay's Place, the Green Lantern, the Bungalow, Taxcsine's Bar, the Northern, the Newport Dance Hall, the Cottage Bar, Inez Parker's Place, and Nigger Dee's (Buffum and Metscher, 1982).

Generally, children were not allowed inside the premises. An exception was made for newsboys; they were allowed in to peddle their papers, but they could not linger (Slavin, 1989). Tonopah's Western Union had a policy of not allowing young messengers to deliver telegrams to the redlight establishments. Solan Terrell worked as a Western Union messenger when he was barely a teenager, and he remembers that if the woman who managed the office in Tonopah was not looking, he would grab the telegrams for the redlight district, which she had placed in a drawer, and would deliver them to the girls because they always gave good tips (Terrell, 1987). Women from the red-light district were allowed "uptown" for shopping and dining, but were not permitted to fraternize in the bars (Slavin, 1989).

Tonopah's red-light district was still in operation in the early 1940s when the United States Army Air Force arrived. During the construction phase of the air base at the beginning of World War II, all the joints in Tonopah closed at midnight so the workers would arrive at work free of hangovers and generally prepared for the next day's hard work (Moore, 1988). When a fire destroyed one of the houses, killing one soldier, the army complained. It was instrumental in having the red-light area shut down. Several of the houses reopened in the 1950s but not on the scale of previous years (Buffum and Metscher, 1982; Metscher, 1989).

On December 14,1951, Alice Nashland, a prostitute working at the Nugget Bar on St. Patrick's Street, was murdered and Inez Parker, the madam of the Nugget, was severely beaten. Mrs. Parker recovered from the beating, but she would not or could not identify the assailant, and the crime went unsolved. After Nashland's slaying, county officials looked more closely at prostitution within the town limits and then closed down all Tonopah's brothels. Shortly thereafter, Bobbie Duncan established the Buckeye Bar, a brothel on the east side of Tonopah, on the dump of the old Buckeye Mine outside the town limits (A. Metscher, 1983:3-4).

Prostitutes in Tonopah have had a long-standing reputation of being generous to others in the community in times of need and tragedy. They have been known to bankroll many a needy cause and to serve as surrogate mothers to untold numbers of young men. Girls from the red-light district sometimes even helped Tonopah's youth with college expenses.

This type of generosity was exemplified by Taxcsine Ornelas, madam of Taxcsine's Bar. Taxcsine, famed for drinking beer from a champagne glass, came to Tonopah in 1930 and settled in the red-light district. For almost a quarter of a century she was a permanent fixture in the community. On May 21, 1954, she was found lying face down in her bed, dead. Some said that she died of a broken heart, having never recovered from the closing of her business following the Nashland murder and the harsh treatment she had received from local residents who had once been more friendly to her. Among items in her personal effects were numerous letters and cards thanking her for her generosity. Letters from "The Boys in the Stockade" at the Tonopah Army Air Base praised her, calling her "The Little Desert Mother" (A. Metscher, 1983:4). After her death, many recalled how fund-drive collection canisters always came out of Taxcsine's overfilled, mostly with her own money, and that she had aided in the purchase of a school bus for Tonopah and had helped in building the army station hospital (A. Metscher, 1983:4). (See map of the red-light district, Buffum and Metscher, 1982.)

Fire in the Belmont Shaft-1911

Underground mining is one of the world's most dangerous occupations. It has been estimated that 7500 men lost their lives in silver and gold mines on the western frontier (Zanjani, 1981:82). An estimate based on 1880 census data calculated that the average western miner had only an even chance of surviving to his retirement (Zanjani, 1981:82-83), and mine safety conditions had not greatly improved in the twenty-odd years intervening between that year and the Tonopah boom.

The Belmont Mine was Tonopah's second-richest producer and one of the most modern and well-equipped mines in Nevada, with extensive new developments in the lowest reaches of the shaft between the 900- and 1166-foot levels (Zanjani, 1981:83). Despite its modernity, a disastrous fire occurred there in 1911. The cause has never been determined. The fire began at 5:30 on the morning of February 23, 1911. Mike Kuliache was bringing timbers down the Belmont shaft when he smelled smoke. His investigation convinced him that the fire was burning in timbers around the 1056 winze. Kuliache notified the shift boss, Frank Burke, by phone. By 7:00 a.m. Burke and Jack Grant had gone down the shaft and pin-pointed the location of the fire at the station in the incline at the 1166-foot level. Burke asked the top man to send several timbermen down through the Desert Queen shaft 2000 feet west of the Belmont shaft and directed them to walk across along the connecting tunnel to the incline (Zanjani, 1981:83).

At about the same time the day shift was arriving Kuliache and his brother were the only two workers in the mine after the last shift had gone home by 4:30 a.m.—and superintendent T.F.M. Fitzgerald ordered the arriving workers to enter the Belmont by way of the Desert Queen. Thus, 80 to 90 men entered the burning mine when they were not needed. When some protested, Fitzgerald told them to enter or collect their time (Zanjani, 1981:83). Fitzgerald, upon viewing the fire, returned to the group of miners who had assembled on the 1000-foot level, selected several of them, and then started with them down the number four winze on the middle vein to the 1100-foot level. Except for Fitzgerald, none of these men escaped alive (Zanjani, 1981:83-84).

By 8:00 a.m., air at the 1000-foot level was beginning to turn hazy and some men were becoming sick. Meanwhile manager Frederick Bradshaw and master mechanic L.F. Long had followed Fitzgerald down to the number four winze and returned, telling those remaining, "He wants everybody down below on the 1100" (Zanjani, 1981:83). Some of the men refused to go, and Long sent them on top, accompanied by his curses. Long then assisted in evacuating men from the 1000-foot level through the Belmont cage. Meanwhile enormous clouds of smoke were beginning to build up in all possible escape routes. On the 1100-foot level, Fitzgerald and Bradshaw had decided—quite mistakenly, as it was later deter-mined—to extinguish the fire by erecting a bulkhead on the 1166, between the number one raise and the spot where the fire was burning on the 1056 winze. Their intent was to smother the fire, but a shift in air currents produced a deadly, almost solid cloud of smoke. Smoke had cut off escape through the Desert Queen. The only hope was through the Belmont shaft, but the large number of men in the mine made it impossible for all to escape the deadly effects of the fire (Zanjani, 1981:83-84).

Between 8:30 and 9:00 a.m. all efforts centered on hoisting the men in the mine from the 1100-foot level. There were two cages in the compartment shaft; an inexperienced hoist operator was on duty. One cage attendant, who had a hangover that morning and took leave of

his duties during the emergency to take an hour's nap in the "doghouse," only compounded problems (Zanjani, 1981:85).

There were at least two heroes in the disaster. One was Sid Glidden, a cager at the Belmont and an uncle of longtime Tonopah resident Norman "Curly" Coombs. Although he suffered burns, he helped rescue miners that day and received a gold watch for his heroism (Coombs, 1987). The other hero was Big Bill Murphy, an experienced cager who made one trip after another down the cage to rescue the trapped men but did not return the last time the cage was raised. Before it went down for the last time, someone asked him if he could stand another trip since the others could no longer tolerate the smoke. He replied, "Well boys, I've made two trips and I'm nearly all in, but I'll try again" (Zanjani, 1981:85). The next time the cage rose to the surface, it was loaded with prostrate and almost unconscious men. On that trip up, several had been caught and crushed between the cage and the face plates. At one point, the cage became blocked in the shaft by bodies caught between the cage and the shaft facing. The hoistman had to lower the cage ten feet and take a running start to free it from the bodies. Big Bill Murphy was one of those who fell (Zanjani, 1981:85).

If there were any villains in the tragedy, aside from Fitzgerald and the others who made bad decisions, they were the hoist operators. The night operator was scheduled to go off shift at 7:00 that morning and did so, feeling no sense of responsibility in turning the hoist over to a less experienced man. The last survivors hoisted to the top brought back the message that there were still men alive down on the 1100-foot level. If the operator received the warnings, he ignored them, choosing to go "by the book." Mine rules state that the cage should be lowered only in response to a signal. Because he had received no signal from the 1100-foot level, he refused to lower the cage. Doing so might have been futile, but there may have been miners on that level who were still alive but too weak to signal. We will never know (Zanjani, 1981:85).

By February 24, firefighters were advancing from the Desert Queen on the intersection with the 1056 winze. The fire was brought under control, and it was later determined to have caused less than \$5000 worth of damage. The tragedy took seventeen lives, but it produced no more than a slight dip in Belmont stock (Zanjani, 1981:86).

The majority of the victims were foreign-born, and the average age of the fifteen men whose ages were known was only 30. Although most of the Slavic miners had refused to enter the danger zone, five had died. As the bodies were raised from the mine, lawmen parted the angry crowd of Slavic miners that waited in a raging blizzard. The miners shook their fists and shouted imprecations at the gallows frame (also known as the headframe). Coffins were not brought to the services for fear their presence might incite the Slavic miners to violence (Zanjani, 1981:87).

One interesting postscript to the Belmont tragedy involved the brother of Jack Ryan, a 23-year-old native Minnesotan who was a victim of the fire. When Jerry Ryan learned of Jack's death, he journeyed from Minnesota to Tonopah to bury his brother. A coroner's jury had determined that "management and bosses showed a lack of knowledge and experience in such emergencies, also inability to foresee or realize the serious danger which might result from a fire" (Zanjani, 1981:88). Jerry was determined to punish the person responsible for his brother's death. Though Fitzgerald had survived, Jerry did not hold him responsible, believing that Jack had volunteered to go down into the site of the fire with Fitzgerald. Instead, Jerry judged that

the operator who had failed to lower the cage, probably a man named Lumley, was responsible. Word got out that Jerry meant to kill Lumley, and Lumley hurriedly left town. Jerry followed Lumley to San Francisco, where he learned that Lumley had taken a ship to the Philippines. Jerry boarded another ship to the Philippines; on arrival there he learned that Lumley had gone to another port a month earlier. He hunted Lumley for a year until he lost the trail. Lumley, it is said, had disappeared without a trace, and Jerry Ryan eventually returned home to Minnesota (Zanjani, 1981:88).

By the end of 1912 the Tonopah Belmont Company had settled with the relatives of fourteen of the victims of the blaze for a sum of \$43,633 (W. Metscher, 1979:10).

The Final Belmont Fire-1939

Twenty-eight years later, on October 31, 1939, Halloween night, fire once again struck Tonopah's second-largest producing mine. An hour after quitting time, smoke began pouring out of the shaft as timbers burned. An updraft caused by the many connections between the Belmont and other shafts at lower elevations intensified the smoke and fire (W. Metscher, 1979:10). Solan Terrell, who had been deer hunting that evening 40 miles away from Tonopah above the Eden Creek mine high in the Kawich Mountains, could see a column of smoke rising from the Belmont shaft (Terrell, 1988). Heat from the fire and smoke warped the steel headframe, destroying the shaft buildings (W. Metscher, 1979:10). The cause of the fire was never determined and the shaft was never reopened. There was no loss of life.

The majority of the ore that was being mined in Tonopah at that time was being hoisted through the Belmont shaft. Efforts were made to work through the Desert Queen shaft at the west end of the company's property, but they were never very successful (W. Metscher, 1979). Total production the next year fell to less than one-third of what it had been the year before and it never recovered; the mining camp did not produce many more total tons between 1941 and 1948 than it had the year of the fire. The 1939 Belmont fire was essentially the funeral pyre for Tonopah as an underground mining camp (Carpenter, 1953:149, Table).

CHAPTER 5 Mining as a Big Business

World War I led to a scarcity of labor, decreased efficiency, and delays in delivery of supplies across the nation, and in Tonopah (and other mining camps) mining costs escalated. Rises in production costs about equaled the increase in the price of silver between 1913 and 1917, which rose from 60 to 85 cents per ounce. Between 1913 and 1917 the daily wage for a machine man went from \$4.50 to \$5.50 per shift. Power was obtained from the Nevada-California Power Company, whose hydro-electric plants in the Sierra Nevada 140 miles away supplied the town. The war did not cause an increase in power costs; however, rises in wages were more than matched by an increase in supplies and equipment. For example, drill steel increased 120 percent, blacksmith coal 78 percent, air hoses 50 percent, mine shovels 120 percent, powder 60 percent, caps 200 percent, fuse 48 percent, rail 100 percent, sodium cyanide 100 percent, and crude oil 75 percent. The Campbell and Kelly Company foundry at Tonopah helped reduce some mine costs through prompt delivery and savings of freight charges.

The Maris Pebble Quarry, 40 miles from Tonopah, supplied grinding pebbles, a good buy at \$25 a ton compared to Danish pebbles that were scarce at \$55 a ton. In 1913, the ratio of mining costs to milling costs was 60:40-60 percent for mining and 40 percent for milling Company costs of driving a cross-cut in 1917 were \$8 a foot. The average cost of mining increased from \$7.70 a ton in 1913 to \$9 in 1917. Total tonnage milled between 1913 and 1917 in Tonopah dropped 13 per-cent; the average silver content of the ore also dropped from 22.4 ounces to the ton to 14.4 ounces. The margin of profit on the value of the ore in 1917 was 24.8 percent (Carpenter, 1918:601-604).

Promoters and Producers: Digging Deep

The role of the promoter in Western mining camps is like the two sides of a coin: Enormous amounts of money were needed to develop mine properties, including sinking shafts and installing hoists, air compressors, and other heavy equipment. Someone had to raise the money, and the promoter was usually that "someone." He sold shares of stock to hardheaded businesspeople and starry-eyed dreamers alike. Some promoters spent little of the money they raised on actual development; they lived well and the investor had little chance of ever seeing a penny of his money again. Others, however, were deeply committed to the cause for which they raised money, and they plowed most of their "take" back into the operation—quite literally, in the case of someone sinking mine shafts! According to Norman Coombs, Billy Douglas was a promoter who put most of his money back in the ground. Douglas was involved with the Belmont, the West End, and the Midway mines. He was a native Nevadan, and his surviving children are successful citizens of the state (Coombs, 1990).

Coombs also tells an amusing anecdote concerning George Wingfield. Wingfield was promoting the Tonopah Divide and sinking ever-deeper shafts, when at the 500-foot level his investors "pretty near forced him to run a cross-cut, and he ran right into that big silver vein" (Coombs, 1990).

Between 1901 and 1921, Tonopah's mines produced 8.1 million tons of ore with a gross yield of \$147,600,000 (Carpenter, 1953:149). At 1989 prices for gold and silver, that would amount to more than \$1 billion. Writing in 1923, Francis Church Lincoln (1982:185) states, "Tonopah is the most important producer of silicious silver-gold ore in the United States." At that time Tonopah's production of silver was exceeded only by the large copper and lead mines, which produced silver as a by-product (Lincoln, 1982:185). In 1921, Tonopah had 4 of the 25 largest producing silver mines in the United States (Lincoln, 1982:185) and, although known as a silver camp, was the second largest producer of gold in Nevada, exceeded only by Jarbidge (Lincoln, 1982:185).

Throughout Tonopah's history, mining companies came and went. Dozens of them were formed between 1901 and 1907, and some were consolidated into much larger firms. Most of the outlying companies folded during the Panic of 1907 and their claims became "open ground" (that is, open for relocation) (Carpenter, 1953:130). In later years when ore discoveries were made near old locations, new claims were filed with new names and company owners. Many of the smaller company names are familiar to old-timers; others have fallen beyond the edge of memory. Among Tonopah companies were the Mizpah Extension, the Halifax Company, the Buckeye Belmont Mines Company, the Rescue Eula Company, the Tonopah North Star Mining Company, the Gypsy Queen Mining Company, the Golden Anchor Company, the Jim Butler Extension Company, the Tonopah 76 Mining Company, the Monarch Pittsburg Extension Company, the West Tonopah Mining Company, the Tonopah and Great Western Mining Company, and many others. Of a vast number of companies, only a few, which are discussed here, turned out to be unusually prosperous. Many of the mines had vast underground workings, often with extensive interconnections to other mines. Ed Slavin reports that there are about 52 miles of drifts and crosscuts under the Tonopah Mining Company property, and he walked most of them numerous times. (In mining terminology, a drift follows the vein and a crosscut cuts across the formation.) It is estimated that there are about 300 miles of workings under Tonopah (Slavin, 1988; W. Metscher, 1989).

The Tonopah Mining Company

The Tonopah Mining Company, the largest producer in Tonopah, yielded more than \$48 million between 1902 and 1948 from two and one-half million tons of ore (Carpenter, 1953:149). Its claims encompassed all of the outcropping ledges of the district originally located by Jim and Belle Butler (Carpenter, 1953:45). A 1904 map shows about 36 shafts on Tonopah Mining Company claims, lying in a northeast to southwest direction (Carpenter, 1953:46). Many of these reached a depth of 100 to 200 feet and were the work of the first leasers. In general, the ore was oxidized to a depth of over 400 feet, containing much linconite and silver chloride, known as hornsilver. By 1907, the company's Mizpah and Desert Queen shafts had reached a depth of over 1000 feet, and the Silver Top Shaft (located about 1000 feet south of the Mizpah) and the Red Plume Shaft, about 1500 feet to the east, were being sunk (Carpenter, 1953:46).

At first Tonopah ores were shipped out of town for treatment, but in 1903 the first mill in Tonopah was constructed for leasers by a Comstock metallurgist named Kinkead. Known at first as the Kinkead Mill, it was soon taken over by the Tonopah Mining Company. It recovered 75 percent of the gold and silver values at a capacity of 8 tons per day. In 1904 the Midway Mine acquired the mill and it became known as the Midway Mill. It had 10 stamps but was not effective (Carpenter, 1953:46). Still later, the mill was acquired by the West End Consolidated Company. In 1906 it was remodeled by adding 10 stamps, concentrating tables, and other facilities. Meanwhile, the Tonopah Mining Company's mill at Millers was under construction (Carpenter, 1953:47). The Panic of 1907 produced some disruption in the Tonopah Mining Company's operations. Between December 1906 and November 1907, its stock fell from \$20 to \$7.50 (Carpenter, 1953:59) and the company had to borrow money to complete its Millers mill (estimated to cost \$800,000) and the power plant (estimated to cost another \$300,000) (Carpenter, 1953:59). The Millers facility, operated under the name Desert Power and Mill Company, was a wholly owned and operated subsidiary of the Tonopah Mining Company (Carpenter, 1953:60). In July 1908, seven shifts a week were reduced to six (Carpenter, 1953:61).

Between 1901 and 1910 the Tonopah Mining Company led all companies in Tonopah in annual production, in tonnage and in value as well as in dividends paid. During that period it produced nearly 60 percent of the town's mine production, paying out nearly one-third of its gross production values in dividends (Carpenter, 1953:71). However, between 1910 and 1930 the company's production was exceeded by the Tonopah Belmont and in some years by the Tonopah Extension and the West End (Carpenter, 1953:71). Over the years, Tonopah Mining Company invested—without much success—in mining ventures in Breckenridge, Colorado; the Arctic Circle; and the Nicaraguan jungles (Carpenter, 1953:71-73). Silver dropped to 45 cents in January 1930, and the mine and mill closed down February 26, 1930 (Carpenter, 1953:78).

On October 3, 1930, the mine reopened under the leasing system. In 1935 there were 60 sets of leasers in the mine, but by 1944 only 7 were left (Carpenter, 1953:136-137). (A leasing set is a work team consisting of a minimum of two men at a particular work site in the mine. Two-men teams were required by state law for safety reasons by 1930, though the law was sometimes bent.) On November 30, 1948, the property ceased production after forty-eight continuous years (Carpenter, 1953:138). Throughout its existence, the Tonopah Mining Company paid out more than one-third of its gross profits in dividends, with production of 513,000 ounces of gold and 45 million ounces of silver (Carpenter, 1953:139), amounting to more than one-half billion dollars at 1989 precious metal prices.

The Mizpah was the deepest of the Tonopah Mining Company's shafts; it reached a level of 1500 feet. The Red Plume went to 800 feet, the Silver Top to 700 feet, the Sand Grass to 1000 feet, and the Desert Queen to 1100 feet (Coombs, map, c. 1928). The best ore in these mines occurred at the higher levels. The Mizpah mines were known as the dustiest in Tonopah; consequently, just as the company held the distinction of being the all-time biggest producer, its mines were also known for killing the most men by silicosis (Coombs, 1990; Slavin, 1987).

The Tonopah Belmont Development Company

The Tonopah Belmont Development Company was incorporated in 1902 in order to develop eight claims east of the Mizpah and Desert Queen shafts (Carpenter, 1953:49). Founders of the company included Tasker Oddie of Tonopah and John Brock of Philadelphia, who were also key figures in the development of the Tonopah Mining Company. In 1905, in a burst of enthusiasm, a 60-stamp mill was constructed adjoining the Tonopah Mining Company's

mill at Millers (Carpenter, 1953:50). Possibly because of its owners' affiliation with the Tonopah Mining Company, investors considered the firm another Tonopah Mining Company as far as its future was concerned (Carpenter, 1953:50). By 1907, however, there was an alarming lack of reserves; stocks were sold to "clear debts," but their value dropped precipitously during 1907 (Carpenter, 1953:62). A discovery on the 1000-foot level in 1909 led to the development of very large ore reserves "under the hanging wall of the Mizpah fault and in rhyolite-dacite, contrary to accepted geological theory" (Carpenter, 1953:63). The Belmont Vein, as the discovery was known, was quite large and in places required 40 feet of square-set and triangular-set timbering (Carpenter, 1953:79). In June 1911, construction near the mines of a new 500-ton per day capacity mill was authorized; it came into operation July 25, 1912. It was de-signed on the basis of experiences gained from the mills at Millers (Carpenter, 1953:81).

Between 1914 and 1915 the mine reached its highest production figure-181,000 tons during a twelve-month period (Carpenter, 1953:83). Cost of mining the ore was \$3.94 per ton, which included development, and ore was milled for \$2.16 per ton (Carpenter, 1953:84). In 1920 the Belmont's Tonopah mill was closed, and the ore was milled at the old Desert Mill belonging to the Tonopah Mining Company at Millers (Carpenter, 1953:89). In 1929 mining for the company was turned over to leasers (Carpenter, 1953:90). In 1930 there were 30 sets of leasers in the mine, with a production of 4580 tons and a value of \$50,208 with silver at 38 cents. This amounted to less than \$1700 per set of leasers (Carpenter, 1953:139). A fire in the shaft on October 31, 1939, closed the mine, although some production continued to be associated with leasing out of the Desert Queen shaft. The mine's total production was \$39.5 million from just over 2 million tons of ore, with almost \$11 million of that, 27.5 percent, paid out in dividends (Carpenter, 1953:141). The Belmont shaft reached a depth of more than 1500 feet (Coombs, map, c. 1928).

The Montana-Tonopah Mining Company

The Montana-Tonopah Mining Company was incorporated in 1902. Its organizer was Charles E. Knox of Philadelphia; Senator W. A. Clark, the Montana copper king and railroad builder, supplied much of the original capital (Carpenter, 1953:50). The company's mission was to develop claims lying directly north of the famous Mizpah claim and extending around the west shoulder of Mount Oddie. A shaft was sunk in barren country rock within 250 feet of the Mizpah line, and ore was encountered at a depth of 370 feet and at various intervals down to the 462-foot level (Carpenter, 1953:50). In 1906 construction of a 40-stamp mill was authorized; its design and construction were under the direction of Francis L. Bosqui, a San Francisco metallurgist. It was completed in 1907 (Carpenter, 1953:64). The mill closed down in 1915. Various efforts to find ore to the north were not successful (Carpenter, 1953:92-93). One notable feature in the Montana's history is its use of leasers beginning in 1915 and continuing until at least 1923 (Carpenter, 1953:93). The mine closed permanently in 1925. It produced a total of 589,000 tons, valued at \$9.3 million (Carpenter, 1953:149).

The Tonopah Midway Mining Company

The Tonopah Midway Mining Company was organized in October 1922 by H. C. (Cal) Brougher, M. C. Cutting, and J. P. Stinson and involved development of claims located by W. J. (Billy) Douglas. The claims were located adjacent to the Tonopah Mining Company on the east of the Montana-Tonopah properties. A shaft was sunk in barren ground within 300 feet of the Tonopah Mining Company's property, and ore was encountered at 425 feet (Carpenter, 1953:51). In 1903 a 10-stamp mill was constructed (Carpenter, 1953:52). The mine was closed in 1924 after production of 33,000 tons valued at \$1.3 million (Carpenter, 1953:97, 149).

The Jim Butler Tonopah Mining Company

The Jim Butler Tonopah Mining Company was organized in 1903 to develop about sixteen claims lying to the immediate south of the eastern end of the Tonopah Mining Company's property. The firm was a consolidation of small companies that had sunk four shafts on claims located close to the sidelines of the Tonopah Mining Company (Carpenter, 1953:52). The company was controlled in Philadelphia and managed by the Tonopah Belmont. Like the Belmont, the Jim Butler was faced with a shortage of reserves from 1907 to 1910, but discoveries in 1910 brought prosperity for another decade (Carpenter, 1953:96). The company became entangled in a lawsuit with the West End and lost, and from 1910 to 1930 it was worked to a small extent by leasers (Carpenter, 1953:98). From 1903 until its closure in 1940, the mine produced 271,000 tons, with a gross value of \$6.4 million (Carpenter, 1953:149).

The West End Consolidated Mining Company

Two men named Carr and Leidy were leasing on the Mizpah in 1901 when they located the West End claim. Ben F. Edwards, a borax producer from Candelaria (on property on lease from F. M. [Borax] Smith), purchased Leidy's interest in the West End and other properties. A company to promote the West End property was formed by Billy Douglas, "Chris" Zabriskie (an executive with the Pacific Coast Borax Company), and Ben Edwards, with Borax Smith advancing most of the money. A shaft was sunk at the east end of the claim, 200 feet from Tonopah Mining ground. The shaft reached 780 feet, but little of substantial value was found. On the 400-foot level, on a quartz vein that had been cut and carried low values, a raise was run; high-grade was encountered within 20 feet (Carpenter, 1953:52-53). The West End shaft was slightly more than 1000 feet deep (Coombs, map, c. 1928). Between 1906 and 1945 the company produced 774,000 tons of ore valued at about \$14.5 million (Carpenter, 1953:149).

The MacNamara Mining Company

In 1901 Matthew MacNamara located a claim (really only half a claim) situated between the West End on the south and the Tonopah Extension on the north. A company was organized by a San Francisco florist, J. L. Josephs, and several others. A shaft was sunk within 400 feet of the Tonopah Extension shaft and ore was encountered at a depth of 200 feet (Carpenter, 1953:54). The shaft reached a depth of about 800 feet (Coombs, map, c. 1928). Due to its close proximity to other workings, the company was involved in disputes over ore deposits. After 1914 the MacNamara operated with leasers only. The company constructed a mill but it was the smallest in the district, and building it was considered a "blunder" (Carpenter, 1953:116). After 1914 the mill operated with ore from other mines, including the Halifax and the North Star (W. Metscher, 1989). The mine did not produce after 1926. Between 1906 and 1926 the MacNamara produced approximately 177,000 tons of ore valued at \$2 million (Carpenter, 1953:149).

The Tonopah Extension Mining Company

The Tonopah Extension Mining Company, the third largest producer in the camp's history, was organized in 1901 to develop three claims located southwest of the Tonopah Mining Company's easterly claims—the Sand Grass, the Red Plume, and the Buckboard. The claims originally had been located by Tom Lockhart, who had tried unsuccessfully to locate over part of Jim Butler's claims. John McCain, a wealthy Pennsylvanian, purchased Lockhart's claims for \$28,000, sunk a shaft, and encountered ore at 183 feet (Carpenter, 1953:54). McCain interested Charles E. Schwab, an industrial magnate, in purchasing a block of stock, and by 1905 Schwab was listed as owner (Carpenter, 1953:54). In 1909 a 30-stamp mill, which was eventually expanded to 50 stamps, was constructed (Carpenter, 1953:68; Dynan, 1921:26). Over the years the original three claims in a 50-acre area were expanded through the purchase of other properties to cover 1148 acres (Carpenter, 1953:116, 126). There were several shafts on the property, and three were among the deepest in Tonopah-the McCain at about 1640 feet, the Victor shaft at more than 2000 feet, and the deepest shaft in the camp, the Cashboy, at over 2375 feet—bottoming out at an astonishing 3600 feet above sea level, lower than Owens Valley to the west (Coombs, map, c. 1928). According to Dynan (1921:26) the original Tonopah Extension property covered 38 acres. The first shaft, known as Number One, was sunk close to the Tonopah Mining Company's boundary. Ore bodies pinched out below the 60-foot level. Before 1910, production was not high, consisting mostly of small shoots of high-grade shipping ore (Dynan, 1921:26).

A new shaft—Number Two—was started in 1912, 1600 feet west of Number One. The next year, a crosscut on the 750-foot level resulted in the discovery of the Murray Vein (Dynan, 1921:26). The Murray Vein was opened up on the 750-, 850-, and 950-foot levels and produced great prosperity for the mine (Carpenter, 1953:117-118). By 1921 the Murray Vein had been followed down to the 1700-foot level and had led to the discovery of the Merger and O.K. vein systems. Ore mined above the 1440-foot level was hoisted out of the Number Two shaft. Below that level, ore was hoisted out of the Victor shaft. In 1922, great ore bodies were opened up on the 1880-foot level of the Victor. An ore shoot on the Victor vein was 700 feet long and up to 80 feet wide (Carpenter, 1953:124).

Water was first encountered at the 1170-foot level, with ever-stronger flows at deeper levels, forcing a great escalation in pumping costs (Carpenter, 1953:124-125). A heavy flow of scorchingly hot water was discovered at the deeper levels of the Victor and Cashboy shafts. By 1926, the company was pumping about 3 million gallons of water a day, over 2000 gallons a minute, from the mine to the surface, with an average pumping head of about 1800 feet (Carpenter, 1953:128).

Large diesel engines had been installed to provide electricity because supplies from the Nevada-California Power Company could not be relied upon. Interestingly, these costly engines were produced by one of Charles Schwab's companies (Carpenter, 1953:129). Ore reserves still existed in the bottom of the Cashboy when work in the mine was forced to cease due to the heavy flow of water—ore was still going down and to the west when exploratory work was abandoned. Norman Coombs states:

I remember my dad even worked some in the Cashboy. He said they really had the ore. He didn't give any widths or anything, but it was one of the biggest ore bodies, I guess, ever found here. The companies hung on as long as they could, working at a loss. But they just couldn't keep pumping from that level, and once they pulled the pumps, that's it. There were enormous pumps down [there] on the 2000—big Nordbergs. They were bigger than this house (Coombs, 1990).

When the Cashboy and the Victor became very deep, the air and vent lines went down the Cashboy and the ore was hoisted through the Victor (Coombs, 1990). Once at the surface of the Victor, the ore was transported over to the Extension mill by means of a tram line and a trestle over the railroad tracks, which many old-timers in town remember fondly (Coombs, 1990).

In 1928 the company went into receivership and the mine was taken over by Thomas F. Cole, a wealthy copper-mining king (Carpenter, 1953:128-129). In January 1931, operations were suspended and 140 men were laid off (Carpenter, 1953:142). In 1940 the two huge diesel engines were sold and shipped to South Carolina. In 1942 the mill was set on fire by someone who was careless with an acetylene torch, causing widespread damage to the lower end of town (Carpenter, 1953:143). The Tonopah Extension Mining Company produced a total of 1.5 million tons of ore valued at \$22.2 million (Carpenter, 1953:149).

John G. Kirchen was manager of the company for 25 years, from 1906 until his death in 1931 (Carpenter, 1953:142). He was highly regarded in the community and, among other things, constructed a park and a swimming pool heated with water from the mine for the use of Tonopah's children.

CHAPTER 6 Daily Life in the Mine

In the era when miners worked for a day's pay, a person obtained a job by "rustling" at the collar of the shaft. That is, he put in an appearance at the shaft, making it known that he was looking for a job. The old-time mine foreman did the hiring, not the manager or superintendent, although they might recommend someone to the foreman. The person who was hiring seldom used an employment agency, preferring to look at the man he might hire. The foreman wanted to see how healthy the prospective miner looked and whether he seemed capable. If the foreman did not personally know the miner, and if the man did not come well recommended from someone whom the foreman respected, he would take the man into his office and quiz him. He might not even ask about mines, but he could tell by the way the man talked whether or not he knew anything about mining. Mines had varying hiring times, but a lot of miners rustled at noon when the foreman came out of the shaft for lunch, though some miners tried to catch the foreman as he went down into the mine in the morning. Sometimes an unemployed miner would learn about a job from relatives or perhaps a friendly person in a bar might say, "Christ, there's a bunch of guys quit last night. You'd better get out there tomorrow morning" (Coombs, 1990). One thing that would finish a miner in search of a job faster than anything was for him to follow an ambulance up to the mine. People in town knew when there was an accident; they would hear three blasts on the bell or whistle and the ambulance would head for the shaft (Coombs, 1990).

Though foremen were sometimes gruff, had rough exteriors, and might not be able to give a man a job, some were known to give their lunch to a hungry man. Cornishmen were often the bosses in the Tonopah mines, probably because of their people's long history in the tin mines of Britain (Coombs, 1990).

Specialists in the Mines

All the big dumps that can be seen around Tonopah mines were produced by hand labor. The only machines used were pneumatic drills and power hoists. There were no mucking machines or motorized trams (Coombs, 1989). The one exception were the electric trams used underground in the Tonopah Extension's Victor shaft from about 1919 to approximately 1930. Electric trams were also used to move ore from the Victor shaft to the Tonopah Extension mill (W. Metscher, 1989). There was also some use of mules for tramming in the Belmont (Slavin, 1989).

Generally, the low man in the mine was the mucker (Coombs, 1990). He typically was given eight hours to clean out the "muck"—the newly blasted rock. In eight hours a person could load 12 to 14 one-ton cars, although men have been known to muck as many as 30 cars in a day (Coombs, 1990). The number of cars filled would depend on several factors. The mucker had to tram, or push, his car out of the face of the drift to a switch where he could get an empty car. The distance he had to push it to the switch would help determine how many cars he could fill.

Often, before blasting, steel sheets would be laid down at the end of the drift so that the newly blasted rock would fall down on the sheets and the mucker could muck off the smooth steel. This practice resulted in much higher production; as many as 20 cars would be a good shift. If the drift was very wide, two men might muck at the same time—in which case, they would try to get one right-handed and one left-handed mucker. If they were in a rush, the driller might begin drilling the holes for the next round in the face as the muckers cleaned up from the previous one. In such cases, the muckers would be working right at the feet of the driller. In mucking off a flat sheet, a round-point shovel was used to pull the muck down onto the sheet and a square-point shovel was used to load it into the car. Norman Coombs (1990) states that he learned to run a machine by mucking behind someone who was drilling. A mucker generally earned 50 cents per day less than workers in other specialties.

The tasks performed by the track man were often combined with that of pipe man if the mine was small. The track man laid new track for the mine cars in the drifts and also kept old track in good working condition. The pipe man's duties involved installing and maintaining the pipes that brought water and compressed air, used to power drilling machines, to the sites where miners were working. In some cases, the pipe man also installed large ventilation pipes that brought fresh air to the work areas.

The timberman, another specialist, placed timber supports in the tunnels and stopes. This task involved considerable skill to ensure that small rocks would not fall and large pieces of the earth would not move. Chute builders specialized in building the chutes that held the muck from stopes above prior to its being loaded into mine cars. The machine man's duties were running the jackhammers and stopers. It was a noisy job, and the machine man often was exposed to more dust than any of the other workers. The machine man had to be skilled in knowing how to drill the "toe or hammer cut," and he also had to decide how to drill the rock so that its unique properties or configurations could be used to blast it as effectively as possible. There were also specialists involved with tramming the cars from the switches out to the shaft.

Others loaded the full car onto the cage, or skip, once it had been delivered to the shaft by the trammer. This person was highly skilled in moving the cars rapidly on and off the cage and in signaling the hoist man on top, according to standard code used in the mines. Old-timers say it was like poetry to see a cager one-handedly receive a full car from the trammer, spin it around, pull an empty off the cage, spin it around, deliver it to the trammer, put the full car on the cage, and hit the bell to the hoistman, all in one continuous motion. Any time the hoist was not operating the company was not making money, so the cager had to be as efficient as a human can be (Coombs, 1990).

On top, the hoist man operated the hoist. There were trammers who took the cars once they came off the cage, trammed them to the ore bins, dumped them, and put empty cars on the cage to return to the mine. When a skip was used and the ore was automatically dumped, it was necessary to fill cars and tram them to the ore bins on the surface or to the dump (Coombs, 1990).

Some miners worked as pipe men or track men for an entire career in the mines, preferring no other specialty. The ideal worker, however, was the all-around miner. Generally, when a man was hired in the Tonopah mines it was assumed that he could do all jobs—driller, timberman, mucker, trammer, and so on (Coombs, 1990).

The manager, who was in charge of the entire operation, seldom went into the mine; his duties were almost exclusively confined to the office. He took care of paperwork and frequently worked with stockholders. If the mine owned a mill, he managed it also. He knew whether the mine was paying and the various details of its economic operation. Usually he was a very competent individual; sometimes he was also the mine owner (Coombs, 1990).

The superintendent was directly under the manager. If a mill was connected to the mine, it had its own superintendent. A good superintendent knew most of the miners on a firstname basis and he had a good grasp of the physical operation of the mine. He knew its veins, he knew the ore, he knew where the workings were. He went into the mine whenever it was necessary for him to be there. He might check on what the ore looked like, the size of the veins, the condition of equipment, and so forth (Coombs, 1990).

The foreman, who reported to the superintendent, was in charge of daily operations, and the shift bosses reported to him. One of the foreman's jobs was to supervise the quality of the ore. Generally he grab-sampled the face after every round blasted and had assays run. Before the next day's shift he knew what the round ran and in which direction the drillers should go. When the mines only ran one shift it was always arranged that the blasting would take place at the end of the shift so the smoke, gases and dust from the blasting would not affect nearby miners (Coombs, 1990).

Usually each level in the mine would have a shift boss; if the level involved extensive workings, there might be more than one boss per level, particularly if there were many more than 50 men on a level. If a mine worked more than one shift, there might also be a night foreman, who usually reported to the day foreman. Often, when the mines worked more than one shift the workers would work days for two weeks, then nights for two weeks or swing and graveyard shifts for two weeks each. Shift bosses usually changed shifts with their men; the foreman did not (Coombs, 1990).

Traditionally, in Tonopah, a worker was asked to complete only a required amount of production each day; for instance, he would muck or tram a certain number of cars. After his quota had been filled, a miner could stop working, but in most mines he could not go home. If he was allowed to go home, he frequently would not be able to ride the cage to the top because they were hoisting muck; instead, he would have to climb out of the mine. Since this required a great effort, many miners would sleep in the mine until their shift was over. This unhealthy practice led to the miners' breathing unnecessary dust and catching cold in the drafts of the mines (Coombs, 1990).

Drilling and Blasting the Face

It might seem that all a miner had to do to open a new portion at the face of a tunnel was to drill a number of holes into the rock, fill them with dynamite, and set it off. Nothing could be further from the truth. If a miner were to randomly drill a number of holes into the face of the tunnel, blasts set off in these holes would have done little more than crack the rock. Knowing how to drill the face of a tunnel is an art. Holes have to be drilled in a particular pattern, known as a "cut," and blasted in a specific sequence. The cut is a response to the fact that when charges are set off in the holes in the face of a tunnel, open space must be provided for the charges to break into. The type of cut used depended on the rock's hardness. Failure to use a cut, or the wrong cut, could mean that the drilling and blasting would have to be repeated, because the rock would fail to break properly. Usually when a miner went to work at a mine he would learn—in a bunkhouse or bar before his first day on the job—which type of cut was preferred at that mine.

Unless the rock in a mine (known as "ground" to the miners) was unusually hard, the type of cut preferred at a mine or camp was, like so many human activities, subject to the dictates of fashion. One type of cut might be preferred in one camp and another cut could be preferred in a second camp. A cut that was out of fashion in a camp might be virtually outlawed there, and a miner who used it could lose his job (Coombs, 1989; Slavin, 1989; R. G. McCracken, 1988).

The rock in the Tonopah mines was not unusually hard, especially in comparison with the hard ground found in the Cripple Creek, Colorado, district or in the Vanadium mine above Bishop, California (Coombs, 1989). In Tonopah, miners used what are known as the "toe" or "hammer" cuts. Although the dimensions of mine drifts varied greatly, the typical drift in Tonopah was about 5 feet wide and at least 5 feet high. (Ed Slavin swears that the short, Cornish miners produced tall drifts, and the tall, Slays dug short drifts, as if each were overcompensating [Slavin, 1989]).

The first holes for blasting in Tonopah were drilled with hand steel, using a singlejack or doublejack. A singlejack is a steel hammer swung with one hand weighing between about 2 and 4 pounds. The doublejack is a larger version of the singlejack, swung with both hands, weighing from 5 to 20 pounds. Before the advent of pneumatic drills, the typical round (a single sequence of drilling, then blasting) drilled using a singlejack was about 2 feet; with a doublejack it was about 3 feet. Once pneumatic drills became available, the typical round was about 5 feet in length (Slavin, 1989).

With the hammer or toe cut, 3 or 4 holes were drilled across the face at about waist height, with the holes angling either up (with the hammer cut) or down (with the toe cut). These were known as the cut holes. In a 5-foot round, the cut holes would be 5 feet in length. If a miner wanted to be sure that his round would break, he also drilled three shorter holes at the same angle above or below the cut holes—above for the hammer, below for the toe. These were known as the baby cut holes. Above the cut holes, about halfway to the top or back of the drift, three or four more evenly spaced holes were made across the face. They went straight in for 5 feet and were known as the breast holes. Above the breast holes at the top of the drift the miner would drill three more holes, known as the back holes. If the back hole in the center of the face was drilled a little higher than the two on the side, once blasted, the resulting tunnel would have a slight arch to it, making sloughing of loose rock and caving less likely. Sometimes three or four holes were also drilled at the bottom of the face, dipping downward at a slight angle. They were known as the lifters (Coombs, 1989). In Tonopah bench holes were seldom used with the toe or hammer cut.

In Tonopah, three sticks of powder were used in each hole, but four sticks were used in each of the cut holes and lifters. Dynamite-filled drill holes were blasted in split-second sequence. The baby cut holes, if used, went first; they had the effect of popping a wedgeshaped portion out of the face. The cut holes were blasted next, and they broke toward the spot just opened up by the baby cut holes. The cavity made by the cut holes gave the breast holes an open area to break toward; they in turn gave the back holes room. The last holes to be blasted were the lifters; they had the effect of cleaning out the bottom and lifting the muck pile out from the face. Then the pile of broken rock would be ready to be shoveled up by the muckers (Slavin, 1989).

Tonopah was known for its higher grade ores and was referred to as a "high-grade camp" by miners. Usually, high-grade ore comes in narrow streaks and requires special methods to ensure that the small quantities of high-grade do not become mixed with the waste rock. Miners often followed small seams of ore only inches wide. Consequently, 2- or a-foot rounds were common; sometimes only 18-inch holes were used. The general method used in mining an ore seam was to expose one side of the seam by tunneling or drifting along one side of it, or by raising vertically along its side. Once the seam was exposed on one side, it could be peeled or cobbed off the wall, carefully keeping the valuable ore separate from the waste rock. Miners specializing in such short rounds were termed "chloriders." Those who pulled 6- or even 8-foot rounds were known as "long steel men."

A drill hole that was blasted but didn't break the rock was known as a "rifle shot," because the force of the blast shot out of the hole like a rifle. Shots that didn't break rock or pull as much ground as intended were known as "bootlegs." Occasionally the charge in a hole would not fire and it was known as a "missed hole." It produced fear in miners because they would have to redrill or muck where the miss had occurred, and there was always the chance of accidentally hitting the blasting cap and dynamite with the drill, pick, or shovel, and having it explode in one's face.

Another thing that produced fear in miners everywhere was known as a "running fuse." A fuse was supposed to burn 58 seconds to the foot, and it almost always did. A miner would calculate how much time he needed to light all his holes and move to a safe distance, leaving a margin of safety before the first shot was fired. Because of what is thought to be a rare manufacturing defect in fuses—said to be related to a deficiency of powder in the fuse where the fire jumps or skips down the fuse faster than it should—the fuse sometimes burns too quickly and thus can set off the powder charge before the miner has moved to safety. Many miners have died in accidents with running fuses (Slavin, 1989).

In the late 1930s, long-time Tonopah resident R. G. McCracken was mining in Empire, Colorado, and had thirteen sticks of dynamite attached to a 17-foot wooden loading stick. He was attempting to free a clogged ore chute and had just placed the stick with the dynamite into the chute. Because of a running fuse, the dynamite exploded while he was still holding the stick. The blast knocked him 30 feet across a stope, and he was unable to hear a sound for a year because of the explosion's noise and the concussion. He considered himself lucky to be alive (R. G. McCracken, 1988)!

Drilling a cut reached its highest point with the "burn cut." R. G. McCracken learned this technique from old-timers in Colorado in the late 1920s (R. G. McCracken, 1988). In very hard rock, a toe cut will not break out enough rock to provide sufficient space for subsequent charges to break toward. The burn cut was not used in Tonopah, because it was believed to waste powder, and perhaps it did, as Tonopah's rock did not require the extra effort. The burn cut begins with the drilling of three holes, two or three inches apart, in the center of the face of the drift. These are known as the burn holes. The next holes are drilled around the

burn. The hardness of the rock determines how many holes will be drilled. Following these,

more holes are drilled on the side and top of the drift. Lastly, holes are drilled at a slight angle into the bottom of the drift (Coombs, 1990).

Again, these holes are then blasted in sequence. The burn holes are shot first, but only the two outer holes of the burn are blasted (the center hole provides space to which the explosive force of the outer two holes can break). The two burn holes that are blasted then create a small space in the center of the face to which the next holes rimming the burn can break. Following that, the shots on the sides and in the top can break to the space created by the second sets of shots, known as the relievers. As with the toe and hammer cuts, the last holes to be blasted are the lifters (Coombs, 1990).

Timbering

An article in the May 11, 1912, issue of The Engineering and Mining Journal ("Triangular Timbering," 1912) tells of a mining first in Tonopah. The Tonopah Belmont Development Company was working on the Belmont vein, which had a 'steep dip to it. Some of the first stopes in the mine were 10 to 16 feet wide and timbers were required to hold the great weight of the ground before it could be backfilled with waste. As the stopes got larger, ranging from 15 to 45 feet in width, it was found that only the heavy, so-called square-set timbers would hold the ground until the hole could be promptly filled with backfill. Square-set timbering, which consisted of heavy posts with beams resting on the posts in a rectangular fashion, was expensive. In an effort to cut timbering costs, the Tonopah Belmont Development Company began using inclined braces rather than vertical posts. The inclined braces produced a series of adjacent isosceles triangles said to be more resistant to deformation by the heavy ground than the square set. This is reported to have been the first use of such a timbering technique in an American mine ("Triangular Timbering," 1912:931). Triangular sets are not only stronger than square sets, but they also require 10 percent less timber in a region where timber had to be hauled from more than 200 miles away. Interestingly, the square-set method of timbering had been developed fifty years earlier at Nevada's other great silver camp, the Comstock (Elliott, 1984:96).

Silicosis

Dangerous as the mines were in other respects, dust was the most relentless killer of the men who worked underground in Tonopah. Tonopah rock has an unusually high silica content. When breathed into the lungs, the silica sets up an irritation that destroys lung tissue. Under a microscope one can see the ragged edges of this glassy material. The more dust a Tonopah miner breathed, the more lung tissue was destroyed. Sometimes after only a few months' work in the mines, a man became almost completely incapacitated. When a miner reached the age of forty in Tonopah—if he lived that long—it was generally considered that his life was almost over. Park benches were placed along the town's main streets so that "dusted" miners could stop and rest and catch what breath they had remaining. The two hospitals that were located in Tonopah were places in which people died from silicosis. The devastating effects of the dust were well known to local residents, and many old-timers report having seen silicosis victims literally cough their lungs out in a dramatic expiration of life. The poor victims were said to have expelled masses of pink, foam-like matter from their lungs in a last dying cough (Coombs, 1990).

So dangerous was the Tonopah mine dust that the many dumps in town and the dust that came home on miners' clothing endangered the entire population. Women are known to have been victims of silicosis. Norman Coombs, a Tonopah native, describes how widespread the knowledge of Tonopah's mine dust was. In his travels, Coombs worked in the mines in the Coeur d'Alenes of northern Idaho. In that area, miners were checked for silicosis every three years or, if they seemed at risk for the disease, every year. Coombs was checked yearly and once asked the doctor why he had to be examined every year,

"when I know a lot of these guys who look like they're dying take one every three years?" "Well," [the doctor said,] "it's your birthplace... even the chickens and dogs got the Goddamned con [consumption] there" (Coombs, 1990).

One physician in town, as well as numerous citizens, noted that the larger and more robust Slavic miners tended to be more susceptible to and fall more quickly to the ravages of silicosis than the smaller, more lightly built Cornish miners. The physician's explanation was that the Cornish miners' lungs were "more moist" in comparison to the Slavic miners' and that the moisture enabled them to resist the dust more—to cough it up and expel it rather than allow it to become lodged in the lungs (Coombs, 1990).

From 1906 until his death in 1931, John G. Kirchen, man-ager of the Tonopah Extension, is said to have refused to hire local youth for underground work, although he would hire them for top work. He knew what fate young men would have if they were to choose underground mining in Tonopah as a means of making a living. Ed Slavin was foreman at the Mizpah for many years during the leasing period, and if someone hired a local youth for underground work that person was ordered by Slavin to "make it so tough on the kid his first day" that he wouldn't come back, or the person who hired him would normally not be around the next day (Slavin, 1987).

Muckers, drillers, and chute-pullers were exposed to the most dust. One drift in the Mizpah had dust several inches thick on its floor. If a miner walked into the prevailing air currents, exposure to the dust was minimal; but if he went with the draft to his back, he would not be able to see his own carbide light after a short distance, so intense was the dust (Slavin, 1987). The mines at the upper end of town were known to be the most dusty. The mines of the Tonopah Mining Company were the worst for exposure (Coombs, 1990).

Although the dust in the mines was a horrible killer, the companies seldom made extra efforts to control it. Interestingly, the Tonopah newspapers almost never carried stories about the disease and its effects on local miners. Occasional stories in the newspapers of other communities in Nevada that called attention to the disease in Tonopah were called "knockers" by the editor of one Tonopah newspaper (Kosso, 1985:76).

Once the water level was reached in the mines, exposure to dust and the danger of silicosis were reduced somewhat, although the air currents encountered throughout the hundreds of miles of workings under the town maintained a fairly dry atmosphere even if the ground was damp (Coombs, 1990). But once water was encountered at the lower levels at the

lower end of town, there was an added problem. The water in the Victor and Cashboy mines was extremely hot, and miners could not stand the temperature in the headings for more than a few minutes. At one point the Victor Mine employed three crews to work one heading, with each crew working only 20 minutes at a time. It is reported that Mexican miners were imported because they were believed to have greater tolerance for the high mine temperatures. Large blocks of ice were taken underground, but much of it melted before it reached the headings (Coombs, 1990).

The large amount of hot water in the Victor and Extension mines necessitated continuous pumping. Some of this water was diverted to a warm-water swimming pool and a park with grass and trees, known as Victor Park, located next to the Victor shaft (W. Metscher, 1989). Until the Victor shaft caved in, steam could be seen rising from it on cold days. Once mining operations ceased in the Victor and Cashboy shafts and pumping stopped, the water rose hundreds of feet in the shafts to its present levels (Coombs, 1990).

High-grading

High-grading is the practice by mine or mill workers of hiding and then removing, from a mine or mill, specimens of gold or silver that contain unusually high values of these precious metals. Because Tonopah ores were seldom very rich in per-ton value, high-grading was not a serious problem in Tonopah; it was, however, a common practice in Round Mountain, Manhattan, Goldfield, and to some extent in Belmont, where workers would high-grade the wire silver sometimes found there. High-grading, a source of tension between workers and mine owners, was one of the most important causes of the labor troubles in Goldfield in 1907 (Zanjani and Rocha, 1986). Miners as a group were honest people, often to the extreme. They were careful to keep their word, and most would not stoop to take another person's property or money without permission. Such scruples, how-ever, did not apply to gold and silver found in the mine or mill. In the case of precious metals the attitude was, "God put it there, and the first one that gets it, it's his" (Coombs, 1990). Most of the old-time miners looked at it this way: "Now I'm digging down here, there's none of these bosses or white collar guys around..." (Coombs, 1990).

Norman Coombs tells of one old-time high-grader who was even known to give the company a break. He would say, "You take this high-grade here, and you throw it right up the back of the drift [the roof] and whatever stays up there belongs to the company." Generally, high-graders were not selfish; they took only a portion of what was found. They knew that if they took too much there would be none for the company, and if the company was not economically healthy, there would be no mine for them to high-grade (Coombs, 1990). The miners working in the face had the best opportunities to high-grade. The muckers had excellent chances when they were digging in the newly broken muck pile. Drillers also had some opportunities, as did the trammers. Others working in the mines had fewer opportunities, especially those such as the outside ore sorters who could be observed more closely by company officials (Coombs, 1990).

The biggest problem faced by the high-grader was how to get his specimens out of the mine. The simplest method was to put it in one's pockets or lunch bucket. This was easiest if the miners did not have to go through a change room after their shift, where they changed

from mining clothes to street clothes after showering. The big mines often had specimen bosses, usually miners who were in poor health and could not work hard any more. The specimen boss

checked for high-graders all the time. If he had an idea that you were a high-grader, he'd watch you. He'd check your lunch bucket, and then you had to stand for a frisk, or maybe if you used the change room and you had the high-grade in your digging clothes, when you were in there showering, he'd check that out. Then there were others outside who watched for sales (Coombs, 1990).

Under such circumstances, miners became very innovative. Rich specimens were placed in small bottles and inserted into the rectum. Gold specimens could be taken out in the mouth; this was particularly effective if the company used metal detectors to check miners before they left the change room and a man was known to have a lot of fillings. One enterprising man used his 6'7" height to his advantage. He would take off his miner's hard hat and get under the rich streak down in the mine while his partner drilled. Some drillings fell into his hair. Then, while showering at the end of the shift, he could easily keep his head above the stream of water and walk out of the change room with the gold in his hair. This method, of course, would not work for bald men. Sometimes flesh-colored strings were used to conceal specimens behind a man's genitalia (Coombs, 1990).

Specimens might be smuggled out of the mine concealed in other objects. For instance, in one mine (not in Tonopah) wood scraps were removed, thrown over a fence at the mine, and then incinerated. Enterprising miners would drill holes in selected scraps, fill them with high-grade, and then fill the holes up with plugs, taking care to mark the wood scraps with a special code. Once they were thrown over the fence, the high-grader had only to recover them when no one was looking, before the company burned them (Coombs, 1990).

The second problem faced by the high-grader was the disposal of his specimens. Some highgraders would sell specimens in the form that they were removed from the mine. Others would crush them in a mortar and pestle at home, separating the gold and silver prior to selling it to a buyer. Sometimes high-grade ore pieces were so unusual and beautiful that they were sold as specimens; they were worth much more for their beauty and uniqueness than for their precious metal content (Coombs, 1990).

Every mining camp had its high-grade buyers. Some, such as local jewelers, were permanent residents of the community. Assayers sometimes bought high-grade on the side. Others were only in the community on a periodic basis, but everyone knew who they were and where they could be found. Tonopah, of course, had high-grade buyers, including a local jeweler and a man named Black Jack Raymond. Chinese were often out-of-town buyers. A buyer always had his own scales and would weigh whatever specimen or bullion the high-grader was selling. It was not uncommon for a buyer to pay off in hundred- or thousand-dollar bills. Some believed that the Chinese buyers were sending the gold back to China (Coombs, 1990).

When a miner was caught high-grading he was usually fired, and word spread to other mine operators in the area not to hire him. After it became illegal for Americans to own refined gold in the 1930s, buyers and sellers had to be on the lookout for federal law enforcement

officers. For many miners, high-grading was a valuable supplement to their income, providing the "velvet" in their standard of living.

Owners were well aware that miners high-graded. As long as it did not become too blatant, they tended to look at it as a cost of doing business. During the 1930s Lou Gordon was manager of the mining operation at Round Mountain, where there were ample opportunities for high-grading. At one point during labor difficulties, when the miners were asking for a wage increase, complaining that they could not support their families on their pay, Gordon met with the crew in the change room. After their discussion, he took them all out in the parking lot and pointing to the brand new cars, asked how it was that there were so many new cars, all fully paid for, if wages were so low. The miners were forced to admit their pay demands were not as necessary as they had contended (Coombs, 1990).

The Leasing System

After being used briefly in the first months following Jim Butler's discovery, the leasing system in Tonopah operated from 1930 until the last mines closed after World War II. A leaser in the mining industry was comparable to a sharecropper in agriculture. (Although the technical term for a person who leases is "lessee," in mining communities throughout the western United States a person who leases and works a mining property is known as a leaser.) In the later leasing period, the first rule in obtaining a lease was that no man could work alone underground. This rule was often ignored, but officially a person had to be able to show he would have at least one other individual with him in the area he intended to mine (Slavin, 1987). The procedure for obtaining a lease was much the same from one Tonopah mine to another; the mines used the same lawyers in town. Some differences probably existed between Tonopah and other mining camps (Slavin, 1988). The first step in obtaining a lease in Tonopah was to get a prospector's permit, which was obtained from the mine management, cost \$10, and was good for 10 days. The money went to cover the prospector's industrial insurance for the 10 days as well as the costs of hoisting him and his prospecting equipment up and down the shaft (Slavin, 1987).

Ed Slavin was foreman for the Tonopah Mining Company for many years, beginning in 1935. He reports that there were about 52 miles of underground workings on the Tonopah Mining Company property, and he estimates that he was responsible for between 200 and 225 leasers scattered over the 52 miles (Slavin, 1987). As foreman he was paid \$50 a week for what was officially a half-time job but really amounted to fulltime work. In addition to being foreman, Slavin had his own leases in the mine and employed miners to work for him. There was no way to continuously observe all workers in the 52-mile expanse of shafts and tunnels. He would usually try to visit each leaser's workings during the day, something that involved walking many, many miles. Safety was his most important concern and his constant worry. Slavin says, "About 3:00 in the afternoon your stomach starts rolling around and you say to yourself, 'Well, I wonder who's going to get hurt?'" He explains, "In 52 miles, you don't know if anybody is hurt until those tags are hanging up that night." After the shift was over and each man had hung his tag on the wall in the office, Slavin says he would give "a big sigh of relief and come home and sit down and have a drink." He did this every night for the many years that he was foreman. In all that time only one man was lost (Slavin, 1987).

The Tonopah Mining Company had a plate glass model of the mine and its veins as they were best understood. (The other major operations in Tonopah, such as the Tonopah Extension, the West End Consolidated, and the Jim Butler Tonopah Mining Company, had similar glass models of their properties.) A miner was free to examine the model in order to focus his prospecting in the most profitable areas. Additionally, the miner could obtain the advice of others who knew the system of ore veins. After a prospective leaser had obtained his permit, he was free to go down into the mine and look anywhere within the 52-mile system—anywhere, that is, that was not leased by someone else. The prospector was free to take samples and have them run by the company assayer at a cost of 75 cents for silver and gold. If the prospector found an available spot in the mine that he liked, he then put up \$100 for supplies, including powder, caps, fuse, and compressed air. The leaser also had to pay to have his ore hoisted out of the mine.

The standard lease was for 100 feet on the vein and would specify that the lease went from the next lower level to the next upper, but this aspect of the lease usually was not enforced (Slavin, 1987). The lease was 100 feet vertically and 100 feet horizontally, for just the width of the vein, along with enough space to work the vein. A 100-foot cube of ground could conceivably have three or more separate leasers on separate ore veins present within it. As a practice, at least 50 feet usually separated sets of leasers in a work area (Slavin, 1989). A leaser could follow the vein on which he had a lease, but at the next level of the mine someone else might have a lease on it. Because the local mills were by then closed, ore was shipped by means of the Tonopah and Goldfield Railroad to the American Smelting and Refining Company in Garfield, Utah (Slavin, 1987).

Under the leasing system (and also in the period before leasing), good records were kept on the gold and silver values of the ore being mined. In the days prior to leasing, a handful of muck was removed from the top of each ore car that went out of the drift to be hoisted to the surface. This sample was placed in a box. The process was repeated with each car removed from the drift until the box was full. When the last car from the drift went out, the box went out on the top of the ore car and was hoisted to the surface along with the muck and sent to the assay house, where it was assayed (Coombs, 1990; Slavin, 1987).

Under the leasing system, a leaser kept a record of the value of his ore; there could be nothing worse than to expend time and money on rock that was of no value. Most leasers shipped their ore to the smelter through a sampler. The sampler would crush the entire shipment and take a sample of it, which typically consisted of 20 pounds, 10 of which went to the smelter and 10 to the company and the miner. The smelter paid the miner on the basis of the sample. A miner could also let the smelter sample the ore, but most did not trust the smelter to do this (Slavin, 1987).

The value of the miner's shipment was calculated according to the quantities of gold and silver at market prices when received by the smelter. Sometimes the market values would change while the shipment was in transit. Ed Slavin remembers shipping ore when the price was 35 cents an ounce for silver, but between the day he shipped it and the day the smelter received the ore, the price had dropped to 25-7/8 cents an ounce. Such a shift in pennies-an-ounce could make a huge difference in the leaser's profits (Slavin, 1987).

The smelting company always took its share before paying the miner. Miners shipping Tonopah ore got a good break on their smelting charges because the smelters often needed silica, which was abundant in the Tonopah ores. After the refining company, the sampler took its cut, followed by the railroad. The company took its cut in the form of a royalty on the ore as well as expenses, charges for powder, fuse, and caps, and 25 cents per ton for hoisting (Slavin, 1987). In Tonopah in 1938, the prices for these items were \$8 plus a 10 percent handling charge for a 50-pound box of powder, \$1.50 for 100 feet of fuse, and \$2.25 for 100 blasting caps (Slavin, 1989). The miner had to pay his industrial insurance and a "rental" on the jackhammers, stopers, and steel that the company furnished. What was left went to the leaser, but if he had hired help he then had to pay his workers. During the 1930s Ed Slavin paid \$6 per day to a mucker and trammer and \$6.50 for a machine man (that is, a driller). Few leasers became rich, but most made a decent living (Slavin, 1987).

Royalties to the mining company were paid on a sliding scale depending on the value of the ore. Low grade about \$15 per ton orecarried a royalty of about 5 percent. The top royalty on high-grade was 30 percent, and anything that ran over \$90 a ton was considered high-grade. Before the closure of its mill (prior to the introduction of the leasing system), the Tonopah Mining Company worked ore as low as \$9 a ton. While Slavin was foreman at the mine, the Tonopah Mining Company's ore averaged about \$48 a ton (Slavin, 1987).

The company maintained the right to cancel a lease if a miner did not operate his portion of the mine in a "workmanlike manner." Technically, it would be hard to define a "workmanlike manner," and Slavin found (and this was the case in most mines) that no leases were cancelled, even when the leaser found high-grade. Such a cancellation, once high-grade had been found, would have spelled the end of the company, because no intelligent leaser would work with a company that defaulted on its agreements. Thus, the company had a major stake in making sure its word was good.

The leaser received what was left (if anything) after all charges and royalties were paid. Ed Slavin recalls:

Well, if you were lucky, it [the ore] comes out pretty fast after you get organized. You can take a four-inch streak and you can get it stripped underneath, drift on underneath and then you start stoping on it, and it can go pretty fast. Of course, it's cheaper to mine going up than going down. We always tried to get going up, but then you get into some damn places... [He recalls one place where]... the vein was sliding down to the north and hit something hard and pushed one piece out on the hanging wall, and then went by it and went on down. I found that piece on the hanging wall; it was 59 tons, I think, in 28 days. I'm telling you. We put timber in there, 18-inch [diameter] timbers every three feet, and they'd be crushed in the morning... the whole damn country was moving... Did you ever see a timber crushed?... the rock will break, or the timber will snap and you could hear it moving, grinding, growling... and in places that cave [cave in] it will push that timber so tight an axe will bounce off of it, it makes it so hard (Slavin, 1987).

Slavin says that he worked veins that were only 4 inches wide but ran \$60 a ton.

Once you start drifting on it, opening it up, but if it's good ore... you sure don't make much ore the first month. By the end of the first month, you're in there a hundred feet and you've got that ore stripped. The next two weeks, you take out and you'll be up there another three feet, you're up nine feet and then you lag it off, and then you throw the waste down, it stays on top of that lag, and then you've got your drift underneath. But you put little chutes in, throw your ore in the chute, take it out, and the waste piles up. Every so often you have to draw it out. But you can move a lot of rock (Slavin, 1987).

A person who could work those extremely small veins and narrow places was known as a chlorider. Chloriders, says Slavin,

would strip the vein and take the waste rock out first; they'd cob the ore off the walls with hand steel and chisel and take it out clean, so they were not paying for a lot of waste. A good chlorider is hard to find. I don't think you could find one today (Slavin, 1987).

Tonopah vs. the Comstock and Goldfield

There were three great precious mineral mining camps in Nevada: the Comstock, Tonopah, and Goldfield. The Cornstock was in decline after the early 1880s; Tonopah and Goldfield, in contrast, were early twentieth-century boomtowns and, along with the daughter camps they spawned in central Nevada, represent the last flowering of the Old West in America: the mining frontier with its individualism and the ubiquitous dream of "rags to riches."

Over a sixty-one-year period, from 1859 to 1919, the Comstock produced \$348 million from 11.2 million tons of ore. Tonopah, in contrast, produced \$150 million between 1901 and 1948 from 8.4 million tons, and Goldfield just under \$90 million from 7.7 million tons of ore between 1903 and 1947. Comstock ore averaged nearly twice the value of Tonopah's ore over the life of those two camps and nearly three times Goldfield's for the life of that camp (see Carpenter, 1953:149; Shamberger, 1982:201; Smith, 1980:292-293, 297).

Thus, on value of production the Comstock can claim title as Nevada's greatest mining camp. Yet both Tonopah and Goldfield are close seconds to the Comstock in yearly production—that is, in tons of ore produced per year. From 1859 to 1919, the Comstock produced an average of 184,000 tons of ore per year, while Tonopah from 1901 to 1948 averaged over 175,000 tons per year and Goldfield, 172,000 tons over the life of that camp. Yearly production is probably the major factor in determining the size of an underground mining camp.

Miners estimate there are 12 cubic feet to a ton of unbroken rock (Coombs, 1989; Slavin, 1989). Thus, in forty-eight years, production at Tonopah averaged 2.1 million cubic feet, or 77,777 cubic yards, of ore per year. One can visualize this amount of material by comparing it to the approximately 3.25 million cubic yards of cement in Hoover Darn. Thus, in forty-eight years, the miners of Tonopah drilled, blasted, mucked, trammed, and hoisted to the surface enough ore from beneath the hills at Sawtooth Pass in the San Antonio Mountains to more than equal the volume of cement in Hoover Dam (computed from data in Carpenter, 1953;149; Shamberger, 1982:201; Smith, 1980:292-293, 297).

The	Comstoo	ck, Tonop	oah, an	d Goldfie	ld
Number of Years of Operation	Millions of Tons Produced	Value of Production	Average Tons per Year	Average Value per Year	Average Value per Ton
	THE	COMSTOC	K 1859-	1919	
61	11.2	\$348,000,000	184,000	\$5.7 million	\$31.17
	т	ONOPAH -	1901-194	18	
48	8.4	\$150,000,000	175,000	\$3.1 million	\$17.88
	GC	DLDFIELD	1903-19	947	
45	7.7	\$90,000,000	172,000	\$2.0 million	\$11.6

Goldfield from Shamberger, 1982: 201.

Mining Another Ore: Turquoise

The Tonopah vicinity is the site of many valuable turquoise mines, and during the last turquoise boom—in the early 1970s—it was a trading center for this gem. One of the most famous turquoise mines in the world is at Lone Mountain. It was discovered by Lee Hand and worked by Rocky Wilson and his father beginning about 1928. Known as the Lone Mountain Turquoise Mine, it has produced some of the most valuable turquoise in the world, including the well-known Lone Mountain spider web nuggets, which resemble sea foam and are not found anywhere else in the world. The mine consisted of a number of underground drifts until it was worked as an open pit in the 1970s (creation of the pit has now made it difficult to reach the existing tunnels) (D. Potts, 1987). The Ajax Mine near Columbus Marsh has been another large producer of turquoise, noted primarily for its unusual green colors. Another valuable turquoise mine is near Candelaria. The mine at Royston has been a high producer, best known for its blue-green and greens. During World War II the Royston property was said to have had 18 sets of leasers. The Easter Blue, originally known as the Blue Gem, is located off the Pole Line Road to Gabbs and was at one time owned by the Cirac family, early settlers in the Reese River area (D. Potts, 1987; J. Potts, 1987). The Easter Blue turquoise is considered by many to be among the most beautiful in the world. Its pure blue occurs in seams of white quartzite; when polished in the hard quartzite matrix, the turquoise brings some of the best prices in the world.

There are more turquoise mines in Lander than in Nye County. In 1973 Don Potts, who was working on the Nevada Test Site, began looking for a turquoise mine. He settled on the X-15 Mine (now known as the Red Mountain Turquoise Mine) near Crescent Valley in Lander County and moved there in 1974, living much as Jim Butler and his companions did when they first came to Tonopah to work their claims. Having only an air compressor and a pickup for equipment, Potts slept on the ground and cooked over a wood campfire, working the claim by hand for four months until he found a man from Battle Mountain with a D-8 cat who would go in with him on a percentage basis. The raw turquoise obtained in the shale deposit ranged from 1/4-inch pieces up to nuggets that would weigh 300 or 400 carats—perhaps 1/3 pound. In 1974 the turquoise boom was on and Potts had no difficulty in selling his stones (D. Potts, 1987).

In fact, it was easier for him to find a market for his high-quality product than it had been for the miners in Round Mountain and Goldfield to sell the gold they had high-graded from the mines decades before. To this day, Potts has no idea how the turquoise buyers found him. He reports that he would work his mine for a week and when he returned home to Tonopah, buyers would be waiting at his door. There were so many persistent buyers that at times he and his wife, Jeanne, drove to Bishop and took a motel room just to enjoy some peace and quiet. He sold only the best grade and set firm prices. This, he said, avoided disputes; one buyer could not complain that Potts had given another buyer a better bargain (D. Potts, 1987).

Historically, Potts says, turquoise booms have run in seven-year cycles. During the 1970s boom, raw, good-quality turquoise was selling for \$400 to \$500 a pound; high-grade turquoise, such as that from Lone Mountain, was bringing \$1000 a pound. In 1976 the turquoise markets began to soften, although the price for high-grade turquoise is still solid be-cause there has never been enough to supply the market. It has now been more than ten years since the last turquoise boom and many in the business expect market activity to pick up in the near future (D. Potts, 1987).

CHAPTER 7 Labor, Politics, and Legislation

There were some serious labor difficulties in the early years in the mines of Goldfield and Tonopah. The Western Federation of Miners (WFM) was founded in Butte, Montana, in 1893 (Rocha, 1977:4), and a local chapter, WFM Number 121, was chartered in Tonopah on July 2, 1901. WFM Local 120 was established in Goldfield in April 1904. The Industrial Workers of the World (IWW, also known as the Wobblies) was founded in Chicago on June 27, 1905 (Rocha, 1977:4). It was the IWW's goal to galvanize the entire U.S. working class into a large industrial union and to then establish a worker's commonwealth. Between 1906 and 1908, the WFM and IWW were parties to bitter labor disputes with the Goldfield mine owners (Rocha, 1977:5). These activities led to violence in Goldfield in 1907 and resulted in the crushing of the unions there through the use of political power by George Wingfield and Senator George Nixon.

Labor Difficulties

Between 1906 and 1907 Tonopah had labor difficulties as well. In December 1906, cooks and waiters belonging to IWW Local Number 325 of the Restaurant and Hotel Workers demanded an eight-hour day, went on strike, and closed every eating place in Tonopah except the miners' boardinghouses. The establishments remained closed for twelve days, and the conservative Tonopah Citizens' Alliance Association imported a carload of scab cooks and waiters from Denver. The strike was a failure (Rocha, 1977:10).

The WFM took on a more conservative character, and the IWW declined in importance in Tonopah between 1908 and 1914. Workers sympathetic to IWW causes kept a low profile at this time (Rocha, 1977:20).

Tonopah again became a center for labor agitation in 1914. There was yet another demand for an eight-hour day and increased wages in Tonopah's restaurants and boardinghouses. The union accomplished its objective in every establishment except the Celtic and Midway hotels, which would not yield (Rocha, 1977:20-21). Violence followed. A mob of drunken miners residing in nonunion houses attacked the IWW Union Hall and tried to lynch John Pancner, the leader of the Tonopah IWW. As the national IWW periodical, Industrial Society, reported, Pancner "fired into the midst of the bloodthirsty hirelings, hitting one man in the leg" (Rocha, 1977:21). The labor leader was arrested and charged with assault with a deadly weapon and intent to kill. Initially John Pancner was acquitted in justice court, pleading self-defense before Judge Harry Dunseath, who was a Socialist. Pancner was rearrested on the same charges, however, and he was convicted under suspicious circumstances when a number of jurors changed their minds after first voting for acquittal. He was sentenced to a term of twelve to eighteen months. Other unionist Wobblies were arrested and later released. Local newspapers rallied against the unionists, accusing them of instigating violence (Rocha, 1977:22-23).

Troubles continued periodically thereafter. On October 24,1914, Boris Thompson, a young Russian immigrant, set fire to the Nevada Theater on Brougher Avenue. The fire engulfed

at least fifteen surrounding homes. Thompson and his IWW attorneys argued that he had started the fire in retaliation for a beating by the Tonopah police. Thompson was convicted and sentenced to twelve to twenty years in prison (Rocha, 1977:24).

The IWW in Tonopah was driven underground during the war years, but it resurfaced in early 1919 (Rocha, 1977:28). Governor Emmet Boyle of Nevada had advocated internment camps to crush the IWW. In 1919, at the governor's behest, the Nevada Criminal Syndicalism Act was passed. The act made it a felony to promote any doctrine that advocated or taught crime, sabotage, violence, or unlawful means of terrorism as a means of accomplishing industrial or political reform (Rocha, 1977:28). Rocha states, however:

the Criminal Syndicalism Act was virtually useless in the Tonopah area because it was next to impossible to secure a convicting jury. The predominantly working class population was generally sympathetic to the radicals, and hostile towards mining corporations, while judicial prosecution only made the Wobblies labor martyrs (Rocha, 1977:28).

Meanwhile, Nevada Senators Key Pittman and Charles B. Henderson and ex-Delaware Governor C. R. Miller, an influential investor in Nevada, were demanding that the immigration bureau move against the Tonopah Wobblies. The bureau did, but could find no deportable offenses (Rocha, 1977:28). In 1919 Tonopah miners went on strike, asking for a rule that two miners would work together for safety, that pay be increased to \$8 per shift for shaft men, and for a six-hour work day (Rocha, 1977:29). A competing union, organized with mine owners' approval, soon declared the strike ended. The IWW was not happy with the settlement, but an injunction was secured suppressing strike activities. George Wingfield was determined to eliminate the IWW from Tonopah and Gold-field. The 1919 strike in Tonopah was a defeat for the Wobblies (Rocha, 1977:30-32).

On February 7, 1920, Tonopah and Divide miners staged a walkout to protest mine owners' abolition of a 1919 fifty-cent wage increase. In April another strike was called. Their demands included "a six-hour day, a seven dollar minimum wage, water spray through all drills to prevent accumulation of dust which impaired breathing, and two men in all workings and on each machine drill" (Rocha, 1977:35). Little support was received from conservative miners and millmen, however. The Daily Times reported, when the strike ended, "by a vote of 268 to 57 the true-blooded Americans of Tonopah yesterday demonstrated their patriotism, as well as their disgust of the radical element, by signifying their intention of returning to work this morning" (Rocha, 1977:35).

The last strike with which the IWW was in any way involved in Tonopah occurred in 1921 and 1922. With little advance notice, the Tonopah mine operators arbitrarily cut wages by 75 cents a day. The mine owners' rationalization for this action was that the cost of living for miners and their families had been reduced and therefore the cut was justified. But the miners did not agree. The resulting strike lasted four months and left an undercurrent of ill will (Rocha, 1977:36). Borax Smith, the owner of the West End Consolidated Mining Company, supported the strike. His miners belonged to the IWW (Coombs, 1990). The miners lost the strike and were forced to take the full 12.5 percent cut in wages ("The Strike at Tonopah," 1921:281).

During the strike, scab miners were imported. They were lodged and boarded in barracks erected near the mines, some distance from town. An article in the August 27, 1921,

Mining and Scientific Press bemoaned the fact that two producers in town refused to hire scabs, but closed down instead, and one producer failed to go along with the other companies in initiating the wage cut. The same article summarized the recent events and gloated over the mine owners' victory:

Until a few years ago the mining companies at Tonopah had little serious trouble with their employees; the scale of wages was high; the mines were comparatively safe and healthful; the men generally did a good day's work; the town was not entirely free from agitators but the better element among the workers was so strong that the irresponsible element was discountenanced. Later, however, the radical labor leaders began to gravitate toward Tonopah and their fellows went with them. The theory of radicalism is that no matter how high wages may be, they are too low; and that no matter how good working conditions may be, they are not good enough. In due course demands were made for higher wages; not once, but several times. It is only fair to say that at first the rising cost of necessaries and amusements made these increases reasonable; but the last one, in 1920, followed by a peremptory demand the justice of which was questionable, to say the least. The mine company acceded, not, however, without protest from some that felt that compliance with the demands which they believed to be unreasonable would add to the arrogance of the radical leaders. The "abject surrender," as it was called by some of its opponents, was made, but the memory of it continued to be a sore spot in the minds of many executives, some of whom were in Eastern offices. They hungered for an opportunity to give the miners some of their own medicine. Last spring the decrease in the cost of living prompted a general reduction in wages . . . the companies at Tonopah had the advantage of the Pittman Act as well as the diminished cost of the supplies and commodities that they used in operating their mines. Nevertheless the employers felt, we believe rightly, that they were entitled to profit by these things and that they were justified in reducing wages to a point where they were in proper proportion to the cost of living... we hope that some way can be found to end the impasse [referring to the residue of ill will the strike left]. Recent developments in the mines have been highly satisfactory and the outlook for profitable and continued production has never been better. Circumstances make Tonopah the most prosperous mining district in the country today; indeed, it is no exaggeration to say that for the moment, it is the most prosperous community in the United States. The recent strike was costly to the companies, the employees, the community, and to the State of Nevada. It emphasizes again the need for deliberation and fairness on all sides ("The Strike at Tonopah," 1921:281-282).

Catherine "Kayo" Banovich Lydon recalls how children threw eggs and rocks at the scabs as they walked up Magnolia Avenue toward the Belmont Mine during the strike in 1921. Though only five years old, she recalls vividly the community support for the strikers. She also recalls her father, dying from silicosis, saying to visitors, "If I had only had water when I was drilling, I wouldn't be in this condition today." Devices to spray water through the drills was one of the demands of the strikers in the 1920 strike (Banovich Lydon, 1987). Ironically, as previously noted, the local newspaper branded the strikers as radicals and Bolsheviks, congratulating those who had voted to return to work for "patriotism" and "their disgust for the radical element" (Rocha, 1977:35). Following the unsuccessful strike, many of the town's leading citizens and patriotic society representatives formed a vigilante committee that was supposed to assist in enforcing law and order and in barring the IWW from town (Rocha, 1977:35). As Rocha notes (1977:37), radical activity in the Tonopah-Goldfield mining district thereafter "was for all practical purposes exterminated."

Socialism in Central Nevada

Although many native Nevadans in the early part of this century considered Socialism "un-American," many of the immigrants to Nevada from throughout Europe in previous decades had been Socialists in their native lands and saw no reason to change their philosophies once they were living in the United States (DeCorte, 1979:49). Socialists had entered Nevada politics in 1906 and profited when Governor John Sparks called out the federal troops in the Goldfield strike in 1908. When Governor Tasker Oddie urged the use of federal troops in a labor dispute at McGill in 1912, Nevada's immigrant miners were outraged and thousands joined the Socialist Party. In the U.S. presidential election of 1912, Socialist candidate Eugene V. Debs ran third behind Woodrow Wilson and Theodore Roosevelt in Nevada, amassing more votes than President William Taft (DeCorte, 1979:50). Moreover, between 1914 and 1919 the cost of living in the United States doubled (DeCorte, 1979:10). With high inflation, labor unrest, and widespread unemployment, there was great potential for political activism in the nation.

The Bolshevik Revolution of 1917, together with the patriotic fervor whipped up during World War I and the blanketing of the country with propaganda that promoted the war as a crusade for "freedom and democracy" and described the Germans as "bestial people bent on world domination," set the stage for the Red Scare hysteria in 1919 and 1920 (DeCorte, 1979:2-3).

This emotional climate was definitely felt in Tonopah. Because of its hostility toward "foreigners" and a local press that almost never took the workers' side against mine owners in a dispute, and because there were fairly strong unionist views and incipient radicalism in much of the work force, Tonopah was fertile ground for political turmoil.

Local newspapers harped on the dangers that bolshevism and "anarchy" posed to Nevada's "free institutions." William W. Booth, editor of the Tonopah Daily Bonanza, wrote, "The proper punishment for every fellow who says he is a Bolshevist [should be] to make him go and live right among 'em" (DeCorte, 1979:22). "Ship or shoot" became the popular expression of the day (DeCorte, 1979:23). In 1919, the Tonopah Daily Times launched a lawand-order campaign; it reported all unsolved crimes and urged citizens to combat the crime wave (DeCorte, 1979:28). Police chief Jack Grant ordered the newspaper editor to "cut it out" and assaulted the newspaper editor. Grant was acquitted, but the law-and-order crusade continued (DeCorte, 1979:29). News of an attack by American Legionnaires on the IWW headquarters in Centralia, Washington, on Armistice Day in 1919, which left four Legionnaires and several Wobblies dead, led the Nevada press to call for the arrest and deportation of "all Un-American, Disloyal, Disturbing, Radical or Destructive individuals" (DeCorte, 1979:30-31).

In Nevada these attacks focused on two groups—immigrants and Socialists (DeCorte, 1979:36). Even in 1919, one-third of Nevada's population were foreign-born (DeCorte, 1979:37). The hostility toward the foreign-born was based on their perpetuation of traditional customs (which indicated a failure to recognize the United States as superior to any other
nation), instigation of labor strikes, violation of Prohibition laws, working for lower wages, and helping "to create a postwar atmosphere of radicalism and lawlessness" (DeCorte, 1979:37-38). The Tonopah Daily Times complained that "the United States cannot afford to be made the dumping ground for Europe's human wreckage" or "the pauperized element of other nations" (DeCorte, 1979:42). Three solutions to the "alien problem" were offered: deportation, restriction of immigration, and "Americanization" (DeCorte, 1979:45).

Americanization would emphasize the teaching of English. The Tonopah Daily Times declared, "find a radical and nine times out of ten he can't speak good English" (DeCorte, 1979:45). The state legislature passed a series of laws that included "no frills education" to alleviate the threat of the state becoming "a people with a smattering of ill-assorted facts" (DeCorte, 1979:46). The legislature also banned employment of noncitizens on public works, and it prohibited foreigners from filing mining claims and holding water and grazing rights. Other legislative bills outlawed interracial marriages, illegal cohabitation, and boxing matches between whites and members of "colored" races. One Reno newspaper rejoiced at the "exodus" of Austrian, Italian, Greek, and "other oriental immigrants" from the state (DeCorte, 1979:46).

World War I weakened the Socialist Party in Nevada, but the party still remained strong in Nye County and Tonopah. In fact, in 1919 the Socialists were so strong in Tonopah that the courts cancelled an election for fear that the Socialists would win it. That year Nye County State Senator James Wesley Stewart, a Republican, died in office (DeCorte, 1979:54). Republicans urged the governor to appoint Stewart's wife to fill the unexpired term, but Governor Boyle, a Democrat, ordered a special election. Fearing that Harry Dunseath, a popular Socialist, would win, the Nye County Taxpayers' Association protested, contending that the special election would be "too costly," and it urged the governor to reconsider (DeCorte, 1979:54). The election was set for January 17, and Democrats joined Republicans in supporting Mrs. Stewart. The Tonopah Daily Bonanza called Tonopah's Socialist Party a "sinister influence" attempting "to thwart the wishes of the representative voters by foisting an interloper on the Nevada Senate" (DeCorte, 1979:55). Worried that they would lose, the taxpayers' association secured a temporary restraining order to halt election preparations. On January 16, a permanent injunction on the election was obtained, thus cancelling what many feared would be a Socialist victory (DeCorte, 1979:56).

In the U.S. senatorial election of 1916, Grant A. Miller, the Socialist candidate, did not wage an active campaign, yet won 29 percent of the total vote (9,572 votes). Democrat Key Pittman received 12,886 votes and Republican Sam Platt poll-ed 10,450 votes. The Socialist vote came mainly from the Goldfield area and, as Israel (1963:34) says, "was primarily a protest against mining conditions rather than acceptance of Socialist principles."

The last time the Socialists entered an election in Nevada was in 1920 in Nye County. Tonopah's Socialists ran Harry Dunseath for district attorney, William (Bill) Thomas for sheriff, and four other candidates—all as "Independents." Again, the fear that the Socialists would win led the opposition to challenge the legality of their nominating position in court (DeCorte, 1979:56). The six Socialist candidates running as Independents were barred from the election. Dunseath and Thomas appealed the ruling to the Nevada Supreme Court, and they were reinstated on the ballot. After a "vicious" campaign, Dunseath lost in a close election, but Thomas won by 19 votes. The other Socialists in the state lost by substantial margins. The Nevada State attorney general used this poor showing to permanently remove the Socialist Party from the ballot (DeCorte, 1979:57). The antiforeigner, anti-Socialist attitude later found expression in the rise of the Ku Klux Klan in northern Nevada and in Las Vegas during the 1920s; the organization never gained a hold in Tonopah (Swallow, 1978, 1981).

The Pittman Act

In 1909 the price of silver averaged 52 cents per ounce (Carpenter, 1953:61). World War I brought increased demand for silver and the price rose from 60 cents to over \$1 per ounce (Elliott, 1984:224). The Pittman Act was passed in 1918 after an appeal from the British government, which had exhausted its supply of silver and required additional sources to meet its obligations (Elliott, 1984:224). In 1918 India was supplying Britain with large amounts of war materials in support of the British Mesopotamian campaign. The British were paying for these supplies with what were called "counsel bills," which passed as rupee currency in India but were redeemable on demand for their face value in silver. There was a redemption run when German propagandists convinced many Indians that the British banks lacked sufficient reserves for redemption. Indeed, the British barely managed to meet their obligations; a default on the redemptions would have meant a collapse of the Mesopotamian campaign and a possible revolt in India (Israel, 1963:75-76). This situation illustrates how the mining of precious metals in the Nevada desert can be—and is—linked to events on the other side of the world.

The effect of the Pittman Act was to guarantee silver producers a minimum of \$1 per ounce until the British loan was repaid, thus stimulating production in the Tonopah mines. The end of the subsidy in 1923, along with a decline in the richness of the Tonopah ores and rising mining costs, initiated the post-1923 decline (Elliott, 1984:224).

The stock market crash of 1929 applied the coup d 'grace to mining as it had been known in Tonopah; production in 1930 was only about 15 percent of what it had been in 1929 (Carpenter, 1953:149, Table). In 1930 the mines in Tonopah closed—never again would large numbers of miners receive hourly or daily wages. With the economic collapse, it was no longer profitable for the mines to be operated in the traditional manner. After the closure of the mines and mills, a number of mines did reopen, but they returned to a method of labor organization originally instituted in Tonopah by Jim Butler and his partners—the leasing system. Under this system, no miner, unless employed by a leaser, was guaranteed a daily wage. Instead, his earnings were based on the value of the ore he produced (Slavin, 1987; Sawyer, 1953:3).

CHAPTER 8 Women, Children, and Ethnic Groups

It is sometimes said that women are the keepers of society, the custodians of tradition. We tend to think of the western boomtown as wide-open socially, a place where rigid class lines are absent. This was true of Tonopah in the early days of Sadie Grieves, Belle Butler, and Lottie Stimler Nay, but in a relatively short time the situation changed. Residents soon created class lines that were not easily crossed.

Social Classes Among Women

prostitutes and dance-hall girls, a woman's social class was usually deter-mined by her husband's occupation and wealth, although it helped for a woman to have been born into a high social class. To a large extent a woman's choice of a husband was determined on the basis of her own social class, her wealth, whether she could put on the "airs" of a higher class, and, to some degree, her personality and initiative.

Prostitutes and dance-hall girls were at the bottom of the female social hierarchy in Tonopah. Saloons and brothels were considered debaucherous and low-status establishments. A man might enter without damage to his social standing, but women could not. Children were not permitted entry into such establishments, with the exception of newsboys selling papers in the saloons. Minnie Belle Thompson, who moved to Tonopah in 1901 at the age of five, describes how her father's surveillance and rules protected her and her siblings from the "more drastic elements" of the booming camp. "About every other door down Main Street was a saloon," she recalled. "We had to step out into the street to pass one, then back on to the board sidewalk again" (Doughty, 1981:6J). Thompson and her family lived in a tent that was next to an alley bordered by saloons and gambling houses. The children would lie on their cots in the darkened tenthouse watching the back doors of the establishments across the alley.

Every evening when it was dark a lovely carriage would draw up at the back door of the saloon near our place. A half-dozen or so beautifully dressed Red Light entertainers would get out of the carriage and enter via the back door. From then on until very late we could hear much laughter and dancing. The girls would "never think" of going in by the front door (Doughty, 1981:6D.

Thompson and her sister were cautioned to never touch playing cards. Partaking of nightlife in the saloons, gambling houses, and brothels was acceptable for men, but not for decent women (Doughty, 1981:7J).

The next level in the social hierarchy was occupied by what might be called the "poor but decent" woman. Such women usually had little education, few job skills, and lacked the manners and refinement of women of the higher social classes. In Tonopah these women often were foreign-born. Even if she had job skills, there could be a social stigma associated with a wife who worked at the same time her husband did. Men whose wives worked were often referred to as pimps because pimps live off the earnings of their prostitutes (Coombs, 1990).

A poor woman's life of hard work often began early, when, as a young girl, she might be hired out as domestic help to more well-to-do women. Saturdays during the school year and in the summers, girls worked as live-in help. Minnie Thompson, for instance, was paid 25 cents a day (Doughty, 1981:7J). The girls would cook, do scullery work, mind children, and help with the washing, using washboards in tubs in the yard. In Tonopah these girls were preferred to "Indian squaws" because Indian women sometimes involved their men and children in collecting their pay (Doughty, 1981:7J).

Minnie Thompson's mother, Mrs. McGonagill, operated a small laundry in a building her husband had constructed for her. She boiled white items in a copper boiler and considered herself lucky when she eventually had four washing machines that were operated by pushing a wooden handle back and forth (Doughty, 1981:7J).

When poor women were widowed or divorced, they encountered additional hardships. In an era when no welfare was available, survival itself could be a remarkable achievement. In her book Life of an Ordinary Woman, Annie Ellis describes her life in central Nevada's mining camps after the turn of the century. As was true of many women of that day, she did not marry the man of her dreams but one who was available. She mourned the death of her first husband in a mining accident mainly because she had learned how "to manage him" (Ronald, 1977:96). After moving to Goldfield, her second husband lost his job, she had a miscarriage, and her daughter died of diphtheria. She was forced to look for work when her husband left her with six hungry, cold children. She resorted to stealing—not firewood or food, but a white stone from the step of a local school to make a tombstone for her daughter's grave (Ronald, 1977:96). The stone remained at Joy's grave until about 1975, when it was replaced by a traditional tombstone (W. Metscher, 1989). Women like Annie Ellis could take little joy in the present. They dealt with life's hardships by dreaming of their children's futures rather than their own. Their children were the only means they had to accomplishment and immortality (Ronald, 1977:96).

In contrast, the "ladies" of the town were at the top of the social ladder. Many of them were oblivious to the lives and conditions of the lower-status residents. As members of the well-to-do, freed from the harsh realities of most women who were scrubbing, cleaning, cooking, and scraping together enough to feed and clothe hungry children and sometimes bury them, these women often romanticized their environment. For instance, Mrs. Hugh Brown remembered the barren Tonopah landscape in her book Lady in Boomtown, subtitled "Miners and Manners on the Nevada Frontier." She recalls "the fascination of the pastel landscape" where, "under the desert moonlight the hills looked as if they had been cut out of cardboard" (Ronald, 1977:98). Ronald believes (1977:98) they fantasized, romanticized, and idealized their world to make life more tolerable and enjoyable. These women formed sewing circles and women's clubs, built and decorated lavish homes, and worked to advance worthwhile causes. "Worthwhile," of course, was defined in terms of the values of their social class and did not include a more equitable distribution of the wealth that the mines were producing. They promoted the advancement of "culture" in the community, defining culture as it would be by the wealthy in cities such as San Francisco.

Mrs. Hugh (Margery) Brown moved to Tonopah in 1904 at the age of 19, the bride of a prosperous young lawyer. The couple remained residents of Tonopah for twenty years. Although her mother had "insisted that no lady should ever be seen doing menial labor," some compromises were required to maintain the three-room cottage the couple first occupied. She sent her laundry to Reno, then a three-week round trip (Ronald, 1977:94). Remaining ever true to the principle that people see what they want to see, she described Tonopah as a "community of city people who lived in rough-board houses and walked unpaved streets, but who dressed and acted as they would in San Francisco or New York" (Ronald, 1977:94). She states:

We all dressed with the same care we would have used in any established community. My "calling dress" was a lovely shade of purple velvet, trimmed with an exquisite "fancy" of marabou. My traveling suit, a thin broadcloth we called "lady's cloth," was made with a short Eton jacket lined with white silk. I wore it with the red poppy hat that caught Hugh's eye at Hawthorne. The skirt was daringly short—four inches off the ground (Brown, 1968:40).

"And what of the glamorous ladies from the other end of town?" Mrs. Brown asks rhetorically in her book, speaking of the prostitutes and saloon girls, about whom she knew little. "Occasional tales filtered through to me—I wish I had known more; it would have been livelier for this book if I had," she laments (Brown, 1968:42). She describes how, from her husband's office in the Golden Block, diagonally across from the Butler Saloon, the short, swinging doors of the saloon permitted an occasional view in summer of a woman standing, with one foot on the bar rail, next to a man. Mrs. Brown was intrigued by the "glamour," but she knew nothing of that life (Brown, 1968:42-43). True to her class, she refers to the highgrading by Goldfield miners as "looting of rich ore pockets" and describes how labor organizers from the Industrial Workers of the World "swarmed" into Goldfield (Brown, 1968:68). Ever mindful of her image as a lady, Margery Brown referred to herself as "Mrs. Brown" throughout her book. Always careful of protocol and the need to not step on a social equal's toes, she describes the dance Tasker Oddie's wife held on the 300-foot level of the Mizpah shaft. She talks of Oddie but never once mentions, either by name or allusion, Oddie's gold-digging wife, from whom he had to "purchase" an uncontested divorce not long afterward (Brown, 1968:48-49; Chan, 1973:30).

All of this is not to say that the ladies of the upper crust of Tonopah's society did not perform valuable services for the community. They raised their voices, and considerable sums of money, to support many worthy activities, and these were valuable contributions to the community. Mrs. Brown, it will be recalled, was instrumental in establishing Tonopah's first public library. Although the snobbery and pretensions of many of these women, which may have damaged the economic and psychological well-being of the community, are remembered with bitterness by some long-time residents of Tonopah, the women did have positive impacts. For instance, they were behind the formation of the Tonopah Ambulance Regiment and the raising of more than \$2300 for the purchase of an ambulance for use in France during World War I (Earl, 1982). And asking people to step beyond their romanticized and often pretentious view of the world would be tantamount to asking them to step beyond the bounds of their own reality, their deeply held values, and beliefs; this is something few of us can really do.

Mining Widows

The death of many miners due to silicosis left Tonopah with a disproportionately large number of widows, many with children to support. Widowed women were forced to find ways to survive. Many no doubt left the Tonopah area, never to return. Those who remained found a supportive and helpful community where people cared about each other. Although most residents did not have much (especially after the middle 1920s), people shared what they had. The town always had a large number of bachelor miners and many widowed women provided meals and sometimes lodging for these men by running boardinghouses (Banovich Lydon, 1987).

One such widow was Miruna Banovich, the mother of Kayo Banovich Lydon. Mrs. Banovich's husband, Mike, had migrated to the United States from Yugoslavia prior to 1900. He settled in Tonopah, sent for Miruna, the sweetheart who had waited nine years for him in the old country, and they were married in Tonopah. The ceremony was civil; she, however, did not consider them "truly" married until years later, after they had several children, when they were married in a Serbian Orthodox church ceremony. Banovich worked in the mines in Tonopah and died of silicosis in 1921 (Banovich Lydon, 1987).

Left with five children, the youngest still a babe in arms, Mrs. Banovich worked out a method of survival in Tonopah that was based on hard work and ingenuity. She ran a boardinghouse for approximately a dozen miners, and she produced a large percentage of the food she served. She kept goats in her yard, which was situated about where Main Street in Tonopah now joins Highway 6. As many as 50 goats, tended by Mrs. Banovich and the older children, grazed on the hills around the town. From the goats she obtained milk and made cheese and skorup, a type of sour cream. The goats—along with sheep she would buy—were also butchered, smoked, and made into kastradina, a Serbian smoked meat. In addition, she maintained a huge garden, probably the largest in town aside from that of the Lambertucci brothers west of Tonopah. She raised a variety of vegetables, including large amounts of cabbage that were used to make kraut. She had her own smokehouse for smoking meats and she kept a cow for milk and butter. Restaurant owners in town knew that Mrs. Banovich was a widow with five children to support, and they provided her with left-over fresh vegetables such as lettuce leaves and carrot tops, which the children collected daily in a wagon at the restaurants' back doors. These greens were fed to the goats and cow (Banovich Lydon, 1987).

Additionally, Mrs. Banovich would obtain a ton or more of grapes each year from a wholesaler and make wine, which she sold in her boardinghouse and by the bottle. Some of the pulp from the grapes was allowed to ferment and was distilled in the still she concealed beneath the floor of the smokehouse. This produced grappa, which she also sold locally. Though it was the 1920s and Prohibition was in effect, Mrs. Banovich was always alerted ahead of time about visits from the Prohibition officers, or "Pro-his" as they were known. She was never caught (Banovich Lydon, 1987).

Mrs. Banovich was shown compassion by others in the community, and she returned compassion to many who were in need. Her daughter, Kayo Banovich Lydon, believes that a number of her mother's boarders seldom if ever paid, but still they were fed by Mrs. Banovich. She also recalls that in the early 1930s, when Hoover Dam was being constructed and large

numbers of the Depression's poor were on the road trying to reach Las Vegas to find work, her mother never turned down a traveler's request for a meal (Banovich Lydon, 1987).

Childhood Activities in Tonopah

Tonopah has always been a good place for a child to grow up. From its earliest days, residents placed the highest value upon the children of the town. Children were seen as the future, and the community was intent upon assuring that each child got as good a start as possible in life. The need for a school in Tonopah was recognized in early 1901. Citizens were assessed for sufficient funds to construct a temporary building, and a teacher was hired at \$90 per month (Sawyer, 1931:22).

School was the main activity in a child's life. Because, with a few exceptions, children were not allowed to work in the mines until they were grown, most children stayed in school and graduated, although graduates were often older than today's students—sometimes 20 or 21 years of age. Ed Slavin, who moved to Tonopah in 1908 and matriculated through the local school system, says, with a twinkle in his eye, "I don't think it was because they were stupid, not as smart as today's kids; sometimes they were older because they would lay out for illness or the family would move; something like that" (Slavin, 1989).

From 1910 to 1940, education was basic, with an emphasis on reading, writing, arithmetic, spelling, history, and geography. Because many ethnic groups lived in Tonopah, a potpourri of languages was spoken, which created quite a challenge for the teachers. Corporal punishment was allowed, and often when a child was whipped at school he could expect another whipping when he got home. School sports were popular, especially basketball. Older residents can still recall the 1925 state championship basketball team that was sent first-class to Chicago to participate in a tournament.

Most of Tonopah's residents were poor. A child who wanted spending money for a movie or sweets had to earn it. Innovative and ambitious children found numerous ways to earn small sums during the 1920s and 1930s. They delivered laundry, groceries for the markets, and telegrams for Western Union. Some held jobs delivering and selling newspapers and working in restaurants and stores; others helped with house-work in private homes. During Prohibition, the many bootleggers in town never had enough bottles for their wine and whiskey. Enterprising children knew who the heavy drinkers were and would visit them, collect their empty bottles, and sell them back to the bootleggers (Terrell, 1987; Banovich Lydon, 1987).

Burros, which ran loose in town, were a major source of pleasure and amusement for youngsters. In the middle 1920s there were 40 or 50 of the animals, descendants of burros that had been abandoned by prospectors and miners. Nobody really owned them, but children in town staked claims to individual animals (Slavin, 1987). The children would ride the burros, chase them, even hook them to wagons and carts. Solan Terrell says (1987), "As mean and cantankerous an animal as was ever born was a burro. If they couldn't bite you, they kicked. If they couldn't do that, they'd roll on you." The "owners" of the burros would try to feed their animals, perhaps even stealing leftover hay from the floors of the livery stables, but most of the time the burros scavenged at the dump and around town. In fact, nobody's trashcan was safe.

Ac-cording to Solan Terrell (1987), "a burro is like a coyote. He can live anywhere; survive anywhere. Where any other animal would starve to death in 30 days, a burro will get fat."

There were also burros running loose on the streets of Goldfield. The youths of the two towns were mortal rivals and often Tonopah kids would ride over to Goldfield and steal the Goldfield kids' burros; the Goldfield kids would then retaliate. Such thefts inevitably brought an attempt to retrieve the stolen animals. "If you went to Goldfield," Terrell states, "you went with a group. And you didn't slow down—you just kept moving as you went" (Terrell, 1987).

Tonopah children experienced an unusual degree of freedom; many seemed to come and go as they pleased. In the summer months, in particular, some, even those who were scarcely in their teens, would be gone for days or weeks at a time. They would take a cart pulled by a horse or burro, or perhaps ride a burro or take an old automobile, and they would move from camp to camp in the Toiyabe and Toquima mountains, fishing and enjoying themselves as only children can do. The adult community kept informal tabs on the youngsters who were out in the countryside. Ed Slavin re-members being out in the Toquimas when he was young, and being cornered by a local ranch woman; he and his friend were taken to her ranch where they were made to have a good bath. Once Slavin's father went up in the hills to fetch young Ed because school had already begun. Mr. Slavin had no trouble locating the boys; the informal network of adults knew the exact whereabouts of the youngsters (Slavin, 1987).

Children could swim in the pool filled with the warm water that was pumped from the Victor shaft at Victor Park, at the lower end of town. Kayo Banovich Lydon describes a typical summer swim:

We'd swim and have a good time, then the boys would decide that they wanted it [the pool] and we wouldn't give it to them. We were out there in old petticoats swimming around and the next thing you knew ... they'd throw ... carbide in the water and we'd take off. Then they'd drain the pool and clean it and fill it again so they could use it (Banovich Lydon, 1987).

The old auditorium provided space for roller skating. The children would also skate on the cement walk by the school-house (Roberts, 1987:111). In the winter there were sleigh rides down the streets of Tonopah, and children would coast down Bryan Avenue on bobsleds. A ride could be made by sled from the top of Brougher Avenue all the way down to Main Street, down Main to the railroad depot, and on to the Extension Mine. Some sleds were homemade; others were store-bought (Roberts, 1987:111-112).

Carnivals would come to town and set up near the present convention center. There were big parades on the Fourth of July (Roberts, 1987:111). Dances were held at the auditorium (where the convention center sits in 1989), at the Eagles Hall, and at the high school (Roberts, 1987:110).

Kayo Banovich Lydon remembers the good times she had as a child, herding her mother's goats on the hills surrounding Tonopah. One of her favorite activities was to climb to the top of Butler Mountain, where the old radar station presently sits. She recalls how, as small children, she and a girlfriend carved their names on a great, black rock at the top of the mountain: "Kayo-1935" and "Sissy-1936" (the years in which they would graduate from high school). During the 1950s, when the armed forces were constructing a road to the top of the

mountain, she asked one of the engineers to be on the lookout for that rock. Although he thought she was kidding, he later told her that he had found it (Banovich Lydon, 1987).

Although Tonopah presented children with many opportunities for fun, it was a town of hard workers. It was natural for children to merge into the workforce once they were out of school. By at least the mid-1920s, state laws prevented children under the age of 18 from working underground in the mines, but some did so in the outlying areas surreptitiously, either working with their parents or lying about their ages. When their ages were discovered by the mine owners or by the mine inspectors, the underaged were usually sent out of the mines.

By 1980 standards, children growing up in Tonopah 50 or 60 years ago seem to have been more active, more willing to explore their total environment, and probably less burdened by a world that has grown numbingly complex. Perhaps those children, who grew up without television and the false expectations that it brings, were less cautious, less sensitive to the consequences of failure, and thus more willing to meet life at full stride.

Ethnic Groups

Events in Nevada's history have long been closely associated with its immigrants. In 1870, 44.5 percent of the total population of the state was foreign-born (Kosso, 1974:29). When Bobbie Lee Colvin, now a resident of Beatty, moved to Tonopah in the middle 1930s she remembers thinking, even as a small child, that the town was extremely cosmopolitan. "You would walk down Main Street and meet blacks, Orientals, Indians, and people from many parts of Europe speaking a variety of languages," she says (Colvin, 1987).

The Chinese were among the earliest non-Indian, non-European residents of Nevada (Chan, 1982:266). Although never present in large numbers, they were among the early residents of Nye County (Carter, 1975:75). The census of 1870 revealed 6 Chinese living in Nye County out of a population of 1082. By 1880 the percentage of Chinese living in Nye County had risen to 3 percent and totaled 59 individuals: 52 males and 7 females (Carter, 1975:75-76). After Jim Butler's discoveries at Sawtooth Pass, a few Chinese moved to the new boomtown. There they established a small Chinatown complete with food stores, laundries, and lottery shops (Chan, 1982:294). Tonopah's Chinese were forbidden to work in the mines and instead found employment as cooks, laundrymen, and domestic servants for whites. It was "quite the thing" for Tonopah's elite to employ at least one Chinese servant (Chan, 1982:294).

Strong undercurrents of racism existed in most frontier mining communities (Shepperson, 1969, 1970; Coray, 1978). In neighboring Goldfield, between 1909 and 1918, anti-Chinese feelings were so strong that Chinese were not allowed off the trains that went through town, and a strict policy of "no Chinese allowed" was followed. In Tonopah on September 15, 1903, shortly after 9:00 p.m., anti-Chinese feelings erupted in violence. A group of 30 to 50 white men gathered at the lower end of town and marched to the Chinese section on the west end of the community. There they entered Chinese homes, roused occupants from their beds, and ordered them to leave town by noon the next day or face public hanging. The Chinese discussed the order and, thinking it represented official sentiments, began making preparations to depart the next day ("Tonopah's Race War," n.d.).

About midnight a dozen or so members of the original mob returned with guns and axes and demanded that the Chinese community leave immediately. There were kicks, punches, and threats of murder. A half-dozen mob members took one group of Chinese, clad only in their sleeping garments, and marched them about a mile out of town and beat them. In the Chinese community, Ping Lung and Ah Sam, who had just retired for the night, were dragged from their home at rifle point, beaten, and released about a mile from town. The next day Ping Lung's blood-spattered body was found. A coroner's inquest determined that the cause of death was a blow from a blunt instrument above the right eye. Eighteen men were subsequently arrested; outraged citizens of Tonopah held a meeting on September 19 and condemned the mob's actions ("Tonopah's Race War," n.d.).

The mob was made up of members of the Tonopah Labor Union (a union that took all workers: miners, laundrymen, cooks, dishwashers, waiters, clerks, and so forth), but the union denied approval of such conduct. Nye County Sheriff James Cufling's investigation into the case lacked enthusiasm; he even dismissed two deputies who had been active in ferreting out the facts of the case. In the proceedings, it was learned that the matter of Chinese competition had been discussed at a union meeting the night before the raid, but no plans had been made to remove the "cancer" from the com-munity. No doubt reflecting the opinion of many in the community, one newspaper editor wrote at the conclusion of the affair, "it might now be in order to bring the Chinamen into court—all but the one who happened to die—and prosecute them for taking up so much of the public's time over this trivial matter" ("Tonopah's Race War," n.d.).

Although not present in large numbers in Nevada prior to 1900, Yugoslavians participated in the development of some of Nevada's earliest towns. In these communities they worked primarily as merchants, saloon keepers, and occasionally as miners (Kosso, 1974:29). After Tonopah was founded in 1900, several individuals of Slavic origin who had moved to Nevada earlier came to Tonopah and found success in business. One such person was George "Jefto" Davidovich who, with his partner Milo Plamenaz, opened the Silver Star Saloon and Hall, which soon became the Miner's Exchange Saloon. Milo Plamenaz also owned the Tonopah Soda Works. John Chiatovich was another businessman in Tonopah. These early Slavic settlers were well accepted in the community and received a good measure of status and respect (Kosso, 1985:72-73).

The south Slays who found their way into Nevada after 1900 differed from earlier Slavic immigrants. They formed sizable communities and worked primarily as miners. Slays in the Tonopah area were mainly Serbs from the Dalmatian coast, Hercegovina, and Montenegro (Kosso, 1985:71). In Tonopah the south Slays did not form a geographic enclave, but lived dispersed throughout the town. They made some effort to preserve Slavic cultural traditions. However, they were denied the status and respect accorded the first Slavic residents of Tonopah. They worked as miners and were seldom mentioned in the newspapers except in a negative light—usually some bizarre incident supporting negative stereotypes. They were hardworking people, a fact that was sometimes held against them (Kosso, 1985).

Traditional customs were preserved through the celebration of Serbian Orthodox holidays. Serbian Orthodox Christmas (celebrated January 7) and Easter (celebrated a week after the Western Easter) were special occasions (Banovich Lydon, 1987; Kosso, 1985:79). A Serbian lodge, which served as a social center for Slavic people in the Tonopah area, was also used as a church because there was not enough money to build a Serbian Orthodox Church (Banovich Lydon, 1987; Kosso, 1985:79-80). Approximately 200 young Serbian miners formed

the nucleus of the lodge in Tonopah (Kosso, 1985:79). However, there were divisions within the Slavic community and resentments carried over from differences in the old country. Orthodox and Catholic Serbians viewed each other as inferior and at times were scarcely on speaking terms (Banovich Lydon, 1987).

Slavic miners are said to have been particularly subject to the disabling and deadly effects of silicosis (Banovich Lydon, 1987; Coombs, 1990; Slavin, 1987; Kosso, 1985:76). Most of the Slavic miners who arrived in Tonopah were young and single (Kosso, 1985:78), but some of those who lived there more than a year or two later returned to the old country for wives (Banovich Lydon, 1987). Slavic miners often suffered discrimination in the mines in Tonopah; they were resented by non-Slavic workers because they would work for low wages and worked diligently and without complaint (Kosso, 1985:80). No matter how badly individuals might get along, however, they never came to blows below ground. There might be fights above ground and in the saloons in the evenings, but the miners were too aware of the dangers of working underground to ever let relations deteriorate to the point of actual fighting underground (Slavin, 1987; Coombs, 1990).

Many in Tonopah believed that foreign-born workers were not contributing to the town's prosperity because they sent wages overseas to relatives (Kosso, 1985:82). It is hard to judge whether the Tonopah papers led, or merely followed, public opinion, but they were often vocal in their disparaging treatment of Slavic residents. The first article in a Tonopah paper featuring a positive portrayal of Slavic culture did not appear until May 1914 (Kosso, 1985:86). An example of a negative account of a Slavic event appeared in an article in which the Tonopah Daily Sun described the "gala time in Tonopah" of "Slavonian Christmas":

They kept the night in a state of uproar for hours, by their shouts and drunken orgies at various parts of town where they live a dozen or more in a house. As a result, whose name [sic] is about three feet long and could not be pronounced in English, had his collar bone broken. Dr. Hammond was summoned to a cabin in the south part of town and found the victim gloriously drunk (Kosso, 1985:81).

Much of the agitation against Slavs and other foreign-born individuals began with the nation's economic difficulties in 1907 (Kosso, 1985:82). The Tonopah Daily Sun became a leader in a crusade against the employment of foreign-born labor. The newspaper claimed that no one else could get work. It accused Slays and Italians of monopolizing "nine-tenths of the work in the mines" and attacked them, calling them "no better than the worst of coolies and they are of as little benefit to the community. They have little intelligence and are low on the scale of civilization" (Kosso, 1985:82). Despite the inflammatory racism of the newspapers and the prejudicial attitudes of many, the town's citizens were, after all, mostly poor miners and more often than not they "pulled together" (Kosso, 1985:80). And not everyone thought that Slavic people were inferior. Jeanne Cirac Potts, who moved to Tonopah as a youngster, entered the sixth grade and used to come home and ask her mother, "Mama, how come my name isn't Cyracovich?" (J. Potts, 1987).

In a community with such visible prejudicial attitudes, many ethnic children encountered prejudice in the schools. Because they had poor English language skills and different cultural customs, the children were often singled out by teachers and other children

for being different and were made to feel inferior. Kayo Banovich Lydon recalls how her older sister Annie—who later became a schoolteacher herself—was sent home from kindergarten because the teacher said she stank. The mother knew her child was clean and was wearing clean clothes; then, after some exploration, she learned that the teacher did not approve of the odor of garlic, a staple Serbian condiment. Mrs. Banovich took Annie by the hand and walked her back to the school. She told the teacher, pointing her finger at her, "You teach my Annie— you no smell" (Banovich Lydon, 1987).

By the time Tonopah began to decline in the mid-1920s, many Slavic families had moved away. The majority went to California, where they had relatives and cultural ties. Actually, this decline had been going on for some years; the 1920 census revealed only 84 Yugoslays living in Nye County (Kosso, 1985:89).

There were many Cornish miners in Tonopah. Cornishmen have been mining the tin mines in their native Cornwall for centuries, and these men were thus skilled and highly desirable workers. In addition, a number of boardinghouses were run by Cornish women. The ethnic term used for Cornishmen was "Cousin Jacks," and the pasties they added to the cuisine of the area remain a source of enjoyment for all (Coombs, 1990; Terrell, 1987).

Historians have found that Italians who migrated to America often exhibited a deeply rooted desire to own land and to farm or garden (Cofone, 1982:124). This tradition is clearly evident in the life of Victor Lambertucci, who deserves mention whenever one is discussing Tonopah's past. He was born in San Genesio, Province of Maceratio, Italy, on September 28, 1884, and immigrated to the United States in 1907, arriving just as the financial Panic of 1907 was gripping the nation. He heard about Nevada and eventually arrived in Tonopah. In 1911, he paid \$350 for a small wooden house and 15 acres of desert land to the west of Tonopah. Looking over his domain, he said, "Dis iss goodenuf for me! I pray to my God for sendin' me here" (Ninnis, n.d.).

Noting later that a mine shaft to the east of his land had encountered water that produced a tiny stream when pumped out of the mine, he talked to the general manager of the Tonopah Merger Mining Company about the possibility of running a ditch for a farm. "Did you say a farm? This is desert lands, not, farming lands," the manager replied. "Mebbe thassa what you t'ink, but sometime you comma down to my place—an' you'll see—I'ma gonna have a farm" (Ninnis, n.d.).

The manager agreed to the ditch and over the years Lambertucci developed a remarkable operation. Between 1921 and 1940 over 3700 head of hogs were butchered and sold at his establishment. A hothouse 136 feet long and 34 feet wide was constructed. During the 1930s Lambertucci dismantled the old United Cattle and Packing Company's packing house in Goldfield and moved it to his property (Terrell, 1987). Victor's brother Dominic later joined him at the farm. Victor Lambertucci died in March 1964 (Ninnis, n.d.).

Poverty in Goldfield

Eastern capitalists took most of the profits out of Tonopah. Goldfield's wealth also did not remain in local hands. At one time, Goldfield had been the largest and most famous city in Nevada, with gold deposits renowned around the world. Under the system of financing of the Tonopah and Goldfield booms, the wealth of the mines, for the most part, did not go for the construction of an economic and social infrastructure. Much of Goldfield's wealth went to build the empire of George Wingfield, which he subsequently lost during the Depression.

After about 1911, Goldfield began to decline, and it never recovered; production during the 1920s was very low (Shamberger, 1982:201), and many of Goldfield's residents lived in extreme poverty. For many families food was scarce and there were many hungry days. Water was precious; it sold for a penny a gallon, a great expense for a poor family. The local fire chief left the coal door in the fire station open so that the needy could take a little much-needed fuel to heat their shacks during the dead of winter (Bradshaw, 1987).

CHAPTER 9

Outlying Areas

Millers: A Railroad and Mill Town

Millers is located approximately 15 miles northwest of Tonopah on Highway 95. Myrick (1962:261) states that Millers was named after Charles R. Miller, one-time governor of Delaware, an investor in streetcar lines, and for twenty years a director of the Tonopah and Goldfield Railroad. A station on the Tonopah and Goldfield Railroad was located there. A post office was active at Millers from January 17, 1906, to September 12,1919, and from February 16,1921, to December 31, 1931 (Carlson 1974:168). Mayme Hooper (1987) recalls that as a young bride she rode the train from her home near Fallon, Nevada, to join her husband in Tonopah. She has never forgotten how impressed she was when her husband drove down to Millers to meet her and, much to her dismay, she couldn't get off the train at Millers but had to ride it on into Tonopah (Hooper, 1987).

Berg (1942:75) states that a small stampede to Millers occurred in 1907. As a practical joke on a friend, a miner who was digging a well sprinkled Round Mountain gold in the dump. Another friend, a Klondike miner, panned it; the news spread and the stampede began. The owner of the well knew nothing about the joke.

The Tonopah Mining Company, through its Desert Power and Mill Company, constructed a 100-stamp mill at Millers on the Tonopah Railroad for the treatment of Tonopah Mining Company ore (Berg, 1942:77). In 1907 the Tonopah Belmont Development Company built a 60-stamp mill there, and it ran until the 1920s. During the 1920s there were two mills in operation at Millers. (The mills were located at the site because of its proximity to water and the railroad.) The Tonopah Belmont Development operated one mill and the Tonopah Mining Company the other (Foster 1987:93; Carpenter, 1953:47).

A large, coal-fired steam plant turned electric generators to provide power for the Tonopah Mining Company's mill at Millers, and a line was established to Tonopah to provide power to the mine. After the completion of a 103-mile line between Tonopah and hydro-electric sources near Bishop, California, the steam plant was closed and sold (Carpenter, 1953:47). A water tank on top of a nearby hill provided water pressure to the small town, which also included a grocery store.

During the 1920s, Josephine Foster's family moved to Millers from Goldfield; she recalls the noise that the stamps in the mills made on a twenty-four-hour basis. If the stamps stopped during the middle of the night, everybody woke up. She also recalls learning how to swim in one of the big cyanide tanks at the mill, which had been converted into a swimming pool for the community's children. The tank was approximately 20 feet deep and 12 feet in circumference. A small ladder allowed the children access to the pool.

Josephine Foster's stepfather, Sam Manor, was a section foreman for the Tonopah and Goldfield Railroad, and the family lived in a company house. There was a one-room school in the community, with a single teacher serving twenty youngsters in the first eight grades (Foster, 1987:93-94, 96). The school was a small, frame building with a raised area in front where the teacher sat. The Pledge of Allegiance was said every morning. Josephine Foster does not

remember much homework at the Millers school, but she does recall frequent use of the encyclopedia in work assignments (Foster, 1987:95). During cold weather the building was heated by a pot-bellied stove.

The frequent desert winds made housekeeping difficult for meticulous homemakers because of blowing dust and grit from the tailings from the mills in the community (Foster, 1987:97-98). The children took baths several times a week in a corrugated tub in front of the wood-burning kitchen stove. A root cellar under the house and an ice box (with ice readily available from the railroad) provided necessary food preservation even during the summer's hottest months. Everyone had an outhouse. Clothes were washed by hand on a washboard, and the women were delighted with the arrival of the first washing machine. Frequently it was necessary for Josephine's mother to boil clothes in a big copper boiler on top of the stove. Monday was wash day, Tuesday was set aside for ironing (heavy metal irons were heated on the stove), Wednesday was for baking and so on through the week (Foster, 1987:103). The old, heavy irons were called "sad" irons—that's how they made the women feel. Josephine Foster re-members aching feet on Tuesdays, which she called the "horrible day" (Foster, 1987:103). With the termination of the Pittman Act, the price of silver dropped to 64 cents in 1920. In 1924 the Tonopah Mining Company shipped approximately 100 tons of ore a day to Millers, with an assay value of \$21.25 a ton. In 1926, with the price of silver down to 51 cents, production at the mill continued to drop, and by 1928 the tonnage was little more than half (19,000) of what it had been in 1924. By 1929 the company had ceased mining its property, turning operations over to leasers (Carpenter, 1953:89-90).

Production at other Tonopah mines also fell, and as the price of silver declined, the mills were forced to close by the early 1930s. The mills were necessary for the mining companies; they made possible the mining of low-grade ores, which otherwise could not have been profitably shipped. Often they ran twenty-four hours a day, and a shutdown could be a catastrophe; operators would run valueless rock through the mills if need be to keep the mills going and the cyanide tanks full. It is interesting to speculate that had milling operations not been forced to close, perhaps some of the mining companies would not have had to shut down during the Depression.

Following the shutdown of the mills at Millers, Mark Bradshaw took over the Tonopah Mining Company's mill, and in the early 1930s he ran the tailings as he had previously done on the large tailings pile at Goldfield (W. Metscher, 1989).

The Kawich Range Area

The area east of Tonopah in the vicinity of the Kawich Range had been the object of mineral exploration and settlement in the 1860s and 1870s, and these efforts led to the founding of the towns of Tybo and Reveille. Tybo means "white man" in Shoshone; Reveille was named after the Austin paper, the Reese River Reveille. These towns did not become permanent settlements, and it was only after the discoveries at Tonopah and the subsequent migration of large numbers of prospectors into the southcentral Nevada region that mining activity in the area of the Kawich and Reveille ranges was revived (Berg, 1942:90). This activity east of Tonopah was somewhat typical of the renewed exploration and settlement that took place in directions outward from Tonopah.

The Reveille mining district was discovered in 1866 by Indian Jim. He showed his discovery to 3 white men, who named it. A year later 50 mines were being developed, and ore was shipped to Austin and elsewhere (Angel, 1881 [19581:526). Two principal camps were eventually located in the district—Old Reveille and New Reveille. New Reveille is located near the crest of the Reveille Range and activity centered about the deposits near the defunct Reveille lead mine. Old Reveille was about 2 miles to the northeast (Kral, 1951:141-142). Because water was short at both sites, a mill was established about 10 miles to the west on the west side of Reveille Valley, using water that had been piped a few miles from springs at the base of the east side of the Kawich Mountains. In 1869, a 5-stamp mill was constructed at the millsite, followed by a 10-stamp mill, but they operated only a short time (Angel, 1881 [19581:526). In 1875, the Gila Silver Mining Company acquired the principal properties and reconstructed the 10-stamp mill, which ran intermittently for four years, producing about \$1.5 million in bullion. The camp was abandoned in 1880 (Lincoln, 1982:179).

Well prior to 1900, a stage ran from Eureka to Tybo and Warm Springs, across Reveille Valley to the old stage station still standing at Twin Springs, and then back to the north up Railroad Valley toward Nyala (Fallini, 1987). An 1888 Rand McNally & Co. map of Nevada shows a road linking Peavine, Stone Cabin, White Rock, and Red Butte Springs, with a cutoff to the Reveille District and to what is identified on the map as the Rutland Mill, located on the east side of the Kawich Mountains. This is probably what later came to be called the Reveille Mill. Pulvers Auto and Highway Map of California and Nevada, published in 1924, shows a road between Bellehelen and Reveille, with another road connecting Tonopah, Blakes Camp, Silver Bow and Gold Reed. (Copies of the two above maps are on file at the Western History Department, Denver Public Library, Denver, Colorado.)

Just a few miles south of the old Reveille mill at the mouth of Eden Creek stand the remains of a stamp mill battery frame that probably predates the 1890s (Fallini, 1987). Helen Fallini suggested that it may have been constructed by old-timers who had found high-grade in the Eden Creek area and prematurely decided they needed a mill, only to have their ore run out following construction. It is interesting that no tailings have been found in the vicinity (Fallini, 1987). Solan Terrell has suggested that the small mill may have been built by operators at Old Reveille who first constructed a test mill where water was handy before constructing a larger mill at the Reveille millsite, where water had to be piped from the base of the Kawiches (Terrell, 1987).

In August 1906, there was a reawakening of interest in Old Reveille after Goldfield promoters called attention to it by advertising in the Goldfield and Tonopah newspapers. Two or three hundred people settled there, but after it was found that the ore did not exist in sufficient quantities to warrant mining on a large scale, the camp was virtually abandoned (Sawyer, 1931:105).

Giovanni Fallini, one of the first Europeans to arrive in the Kawich area and to make the region his home, was born in the border area between Italy and Switzerland. After his mother and twin brother died, he worked his way across the Atlantic on a ship to New York City. He took the train from New York to Eureka, Nevada, where he had relatives, arriving in 1854 at the age of twenty. At first he worked in the mines; later he began hauling freight. He married an Italian girl in Eureka and eventually moved to Tybo, where he earned his living hauling wood and freight (Fallini, 1987).

His freighting business often took him south to the Reveille-Eden Creek area. Like so many Italian immigrants to the United States, he loved agriculture and ranching. Upon discovering the water at Eden Creek, which was much more abundant then than now, he took up a homestead. He had little money for the purchase of livestock, so he acquired his cattle one at a time. He would work for somebody and buy a cow with his earnings; then he would work for someone else and buy a heifer calf, and so on. By 1900 he was operating a small store at the Reveille millsite, where several families lived and a school was located. Fallini hired Abe Aragoni to build the rock house at Eden Creek, which still stands. Mrs. Fallini passed away, and not long after that the store burned down when one of the boys, who had been left alone, accidentally filled a kerosene lamp with gasoline and lit it. He was not seriously injured. At Eden Creek Fallini kept a few cows and had a big garden; he raised potatoes, which he sold to the miners in the area. Over the years the Fallini ranch grew, with the purchase of Twin Springs from the Lorigans and a man named Moore, some acreage from the Reischkes, and land and assets from the United Cattle and Packing Company (Fallini, 1987). (Hernan Reischke also operated stores at Reveille and Nyala at one time, and later had a store in Tonopah [W. Metscher, 1989]).

Giovanni Fallini died in 1940 at the age of eighty-seven and was buried near his stone cabin at Eden Creek. He is remembered as a generous man who was willing to share. He always placed a high value on honesty; he told his children that if he ever caught them stealing or cheating, he would shoot them (Fallini, 1987).

Shortly after the turn of the century, discoveries of precious metals were made at Bellehelen and Eden Creek (Kral, 1951:17, 52). Bellehelen, located several miles south of Warm Springs near the crest of the Kawich Mountains, is said to have been named for two mules. Although it was never more than a tent city, at one time it had a population of 500 (Kral, 1951:17). The Pacific States Mining and Milling Company produced \$177,000 of ore between 1917 and 1921. In about 1922 the Tonopah Kawich Mining Company and Pacific States Mining and Milling Company formed the Bellehelen Merger mine and built a 50-ton cyanide mill, which operated for a few months in 1923 (Kral, 1951:17). Ore valued at about \$4000 was shipped from the old Peterson Mine in the district's west end in 1935 (Kral, 1951:17).

The Eden mining district lies about 21 miles south of Warm Springs on the east side of the Kawich Mountains at an elevation of 7000 to 8000 feet (Kral, 1951:52). Peaks rise to the west to an elevation of 9500 feet (Lincoln, 1982:166). Although there was mining activity in the Eden area decades earlier, John Adams is credited with the first locations in early 1905 (Kral, 1951:52). Leasers worked near the mouth of Eden Creek, formerly known as Little Mill Creek, and made shipments in 1906 and 1907 (Kral, 1951:52). In 1926 George H. Chubey staked out claims a few miles southwest of the Eden Ranch and worked them until his death (Kral, 1951:53). Chubey was a Moravian who came to this country as a young man. He worked his mine diligently and had faith in it; he believed that he was going to strike it rich. He would leave his mine and go out and work for others, sometimes for as long as a year; then, with enough food and powder, he would come back and work his mine again. He never did get rich, however (Fallini, 1987).

Mark Bradshaw and the Stingleys were also active in the Kawich area. Prior to 1930, Bradshaw had promoted a property and drove a very long tunnel without finding ore (Terrell, 1987). The Stingleys, who had come from the East, also had mining property nearby (Kral, 1951:54). They worked in the area until Harriet Stingley took a job in Tonopah (Fallini, 1987).

Clyde Terrell and his sons acquired the South Gold Hills Mine about 1930 or 1931, and in 1936 they began construction of a mill near the mine, high up in the mountains. Although the elder Terrell had hopes for the property and it remained in the family for years, it was never productive; it was sold in the 1980s. Guy Birch was hired by Terrell to frame the mill, and the structure still stands. Of the construction, Terrell's son Solan says, "I still can't believe the man doing it—cutting a 6-by-6 with a handsaw, diagonals. Everything was by hand—no power tools. Old Guy Birch was an artisan and he was very well known and respected for his ability." Of the mining venture at Eden Creek, Terrell says, "I have to admit that my father was more of a dreamer than a mining man. He was honest as the day is long and [through] the years he worked out there, if he made a nickel an hour, he was quite lucky" (Terrell, 1987).

A mail line ran through the area for many years (Fallini, 1987). It went from Warm Springs over the mountains to Bellehelen, from Bellehelen to Eden Creek, and then over the range through Golden Arrow and back to Warm Springs. It was a stage line and ran once a week. The mail was dropped off at Eden Creek, which was the gathering place for everyone in the area. The route was finally abolished in the 1930s when people started to leave the area (Fallini, 1987).

Victor Stancher had a mine in the area, and he lived in a hole in the ground that he had dug out of the side of a mountain. He had boarded up the front and placed a door and window there. Bautista Vener had a small cabin at the foot of the Kawiches west of the Reveille mill. Vener's place was near a well-watered site that was an Indian camp, possibly a traditional Shoshone residential area. Four or five Indian families lived there, including Johnny Charles, Pigeon Pedro, and Pedro Sam (Fallini, 1987).

Over the years, the Reveille Mill was rebuilt several times. 0. J. Belleville made additions to the mill in 1945 and produced about \$2000 by milling tailings (Kral, 1951:142). In 1954, R. G. McCracken, a miner from Colorado, acquired an interest in the New Reveille lead mine and refurbished the old Reveille Mill. His intention was to mine and mill the large deposit of lead and silver that had been blocked out in the New Reveille lead mine. He rebuilt a rickety old cabin at the millsite and worked the dumps at the lead mine, milling the screenings. High-grade lead and silver concentrates were shipped over the next two years. In 1956, ore that had previously been broken in the mine and was in chutes was hoisted, and air and water lines were brought in. The mill was expanded in 1957 with the addition of crushers and classifiers. The large concrete foundations that are still visible at the millsite were poured at that time. McCracken worked the mine with his brother, Jack, and his two teenage sons, Robert D. and Mike (R. D. McCracken, 1988).

The expanded activity at the Reveille Mill was generated by a South Dakota promoter named Les Emigh. As has so often happened in the past, Emigh made elaborate promises of prosperity and riches to both investors and McCracken, but the only one who really prospered in the undertaking was Emigh. He raised hundreds of thousands of dollars by promising midwestern farmers that there would be milling of the lead mine's proven reserves, but almost none of the money ever found its way into the mine or mill. McCracken abandoned the site in 1958 and went to work at the Nevada Test Site. He spent the next seventeen years there, completing his career as a miner. While at the Reveille Mill, McCracken had moved three cabins down to the millsite from the Terrell property at Eden Creek and had constructed a modern bunk-house and cook-shack combination. By 1989, the mill had been stripped; only the mill frame and the shells of two of the cabins remained (R. D. McCracken, 1988).

CHAPTER 10

Life on the Ranch

The discovery of silver in Tonopah in 1900 and gold at Goldfield in 1902 set into motion a feverish search for other deposits of precious metals in southcentral Nevada. Prospecting in the area was further stimulated when George Wingfield and George Nixon consolidated the mines in Goldfield, eliminating jobs for many operators and leasers. In addition, labor unrest in Goldfield in 1906 and 1907 forced former mine employees to also turn to prospecting (Sawyer, 1931:102). Boomtowns resulting from discoveries quickly came and vanished. The 1907 Directory [of] Goldfield listed 31 towns as existing in Esmeralda County. By 1931, 20 could not be located, indicating the fleeting nature of their existence (Sawyer, 1931:129).

The Gold Reed mining district attracted much attention. This district was located at the south end of the Kawich Range about 54 miles east of Goldfield. The first locations were made there in December 1904, and by the next spring several hundred men had rushed to the camp. By August 1905, ten miners were at work in the camp of Kawich in the Gold Reed mining district (Ball, 1907:111). In 1906, Orville Knighton "O.K." Reed advertised the discovery of rich gold at various places on claims he and his partners held in the Kawich area, and he promoted the town of Kawich, calling it Gold Reed. Reed had four partners who had staked him. Jack May, who later became Reed's brother-in-law, also held a number of claims in the district and had been staked by a second group of four partners (Slavin, 1989). By spring 1906, the population of Gold Reed was variously estimated at 300 to 1200. Those who rushed to the area found that Reed and May had filed on most of the known mining ground (Sawyer, 1931:102-103). One wag is said to have posted a sign on Kawich's main street reading, "I claim six inches east and six inches west, O.K. Reed (the son of a bitch) claims all the rest" (Sawyer, 1931:103). By the end of the year only a few scattered tents remained at Kawich. Disappointed prospectors turned to the north to Golden Reed, also promoted by Reed, but found only milling-grade ore. The few hundred who had settled there soon drifted away (Sawyer, 1931:103).

The Reed family originally came from Canada; the father, John Reed, had first moved to Paradise Valley in 1860 or 1861 and ultimately located in Unionville, Nevada. There were five sons O.K. (born in 1875), Jake, Ed, Bob, and Ken—and two daughters, Mable and Flossie (Slavin, 1987, 1988). The sons all grew to become big, rawboned men. O.K. and Jake went to Alaska during the gold boom, but instead of taking pack animals such as horses or mules, they took oxen. Eventually only one big, white ox was left. They butchered it and sold the meat for a very good price. Later, while building a raft to go down some rapids, O.K. cut his leg. Jake, who was 6'6" tall and weighed 230 pounds, had to carry O.K. out of the wilderness (Slavin, 1987).

O.K.'s interest in prospecting persisted, and not long after Jim Butler's discovery at Tonopah, both O.K. and Ed found themselves in the booming Tonopah area. In the Gold Reed district, O.K. found gold so rich that he could stand off 50 feet and see the gold in the outcropping. A mine was established at the site by O.K. and his two partners, Jack May and Austin Wardle's father. The mine had extensive workings and a stone house was constructed at the site, using the same rock that was used in the construction of the Tonopah courthouse. Eventually, Reed and May sold their interests in the mine (Slavin, 1987, 1988).

From Mining to Ranching

One day O.K. and his brother Ed were riding north along the west side of the Kawiches and they passed Hawes Canyon. They were thinking about ranching, noting what beautiful ranching country the area would make. At that time, in the early 1900s, there was more moisture in the Tonopah region than there is today. The valleys were filled with sand or rye grass, and the sage was tall and healthy (Slavin, 1987, 1988). According to Ed Slavin (1987, 1988), O.K. had money in his pocket when they rode up Hawes Canyon to the dugout where Jack Longstreet lived. O.K. asked the older man if he would like to sell his place, and Longstreet agreed to O.K.'s purchase. Another source (Zanjani, 1988:103), however, states that Longstreet sold his property to another individual before it was acquired by O.K.

For the first year O.K. and his wife, Maude, lived in a tent on the land. Indian women who lived in a small village at the mouth of the canyon helped Maude with the work, and the Indian men helped O.K. and Ed. The Reed family grew: Florence was born in 1906, Helen in 1908, and, later, Lucille and little O.K. The children were all born in Tonopah (Slavin, 1987, 1988).

With hard work, careful investment of funds, and probably a little luck, the ranch grew to proportions that stagger the modern imagination. O.K. and Ed made a number of land acquisitions and then, in order to more effectively market their beef, they merged with the Humphrey family in Goldfield to form the United Cattle and Packing Company (Slavin, 1987). They practiced what is today called vertical integration: They produced beef on their ranch, processed it at their slaughterhouse in Goldfield, and marketed it through their company-owned outlets in Tonopah, Goldfield, and in California.

The ranch dimensions were huge, although of course they did not have title to all the land within its boundaries because most of it was federal land and there were small ranches located on the periphery. They did have most of the grazing rights, and they controlled most of the water in the area. On the west, the ranch took in Rye Patch, Ralston Valley, and Cactus Valley; there were holdings in Monitor Valley ranging north of Belmont to Pine Creek. It stretched to the south as far as Paiute Mesa. On the east it included holdings in Sand Springs Valley and in the Quinn Canyon Range, and it extended north to Blue Eagle, about 14 miles south of the present location of the oil wells off Highway 6. The ranch also included part of Stone Cabin Valley, part of Railroad Valley, and part of Reveille Valley (Slavin, 1987, 1988). In all, it might have been more than 100 miles on its longest north-south and east-west axes, encompassing as much as 3 million acres, more than three times the size of the fabled King Ranch in Texas (Slavin, 1988), but smaller than one of the world's largest sheep stations at Anna Creek, South Australia, with its approximately 7.7 million acres (Terrill, 1988:188). Ranching must have run in the bloodstream of the Reeds, for O.K.'s brother Jake and a man named Taylor acquired a large ranch in Elko County, perhaps rivaling the size of O.K.'s and Ed's. Ken, Bob, and a half-brother named George also had ranches (Slavin, 1987, 1988).

To develop the ranch, it was necessary to drill wells to provide water for the cattle. At first wells, some as deep as 100 feet, were dug by hand by the Reeds. Later, a large steampowered drill was used, and still later well drilling was powered by a big Fairbanks-Morse onelunger engine, which, with its big flywheel to store momentum, would fire once and then coast two or three revolutions. O.K. built a nice house and outbuildings at the ranch headquarters in Hawes Canyon. For many years there was a school there for O.K. Reed's children, the May children, and youngsters from the Indian village. (O.K. and Jack May were married to sisters— Maude and Mable; after Jack May left Mable, she resided for years at the ranch with her children.) Ed, who never married, tended to headquarter in a cabin located at the Cedar Pipeline watering hole (Slavin, 1987, 1988).

It was a tremendous job to manage the many cattle scattered over such an enormous area, but O.K. and Ed Reed had a tremendous capacity for hard work. Ed would take a pack animal and horse and be gone for a month at a time, riding over the vast holdings. Ed Slavin recalls watching Ed Reed remove a column of pipe out of a 100-foot well:

He was pulling it out by hand. I told him I wouldn't work that way for nobody, not even myself. Ed said, "What the hell is wrong with that?"

I said, "Over at the well there, Number One [well], there's a block and tackle. I'd go over and get it. It's easier."

Ed said, "Too much trouble to get it," and he continued lifting the pipe out of the well, hand under hand (Slavin, 1987).

When the two older Reed girls graduated from the eighth grade, they left the ranch at Hawes Canyon to finish high school in Goldfield, where they lived in the Goldfield Hotel. Many old miners lived in the hotel then, and they caringly looked after the girls' interests. The girls took their meals at the hotel, and if they were not down in the dining room for their breakfast each morning at a certain time, the cook, Marco Dobro, would bang on the steam pipe that ran from the kitchen through their room to prod them along. Ed Slavin, who later married Helen Reed, reports that he would much rather have gone to the Reed home in Hawes Canyon to pick up Helen and face the stern O.K. than to have to go to the hotel and be scrutinized by the eagle-eyed old miners. Helen and Lucille Reed were excellent horsemen who could ride with the best of the cowboys. At roundup the girls would start out at 4:00 a.m., and by noon they would need fresh horses. O.K., however, never allowed the girls to rope or wrestle calves (Slavin, 1987, 1988).

At its peak, the United Cattle and Packing Company had an enormous number of cattle. Ed Slavin remembers a herd strung out on a trail from Ned's Cash to Cedar, a distance of 15 miles. By the mid-1920s, however, the ranch was beginning to falter. The late 1920s were generally not a prosperous time for American agriculture. The company had held back on selling cattle because of income taxes, and at the same time a ten-year drought created poor range conditions. Range conditions grew so bad and the cattle became so poor that in about 1927 the company was forced to move the herd off the range. They rounded up much of the herd, drove it into Tonopah, and put the cattle on the railroad. The strong cows arrived in Tonopah the first day, the next day a weaker bunch came along, and the third day, still another. On the fourth day the cows who arrived were so weak they could barely walk. The cattle were shipped to the Mason Valley, and when they were sold the next spring they brought only \$6 or \$7 a head, just enough to pay the winter feed bill and freight charges (Slavin, 1987, 1988).

The United Cattle and Packing Company declined after that and its holdings were eventually sold off. Land and water rights were sold to the Fallinis, Cliffords, and other smaller ranchers in the vast area. The ranch headquarters at Hawes Canyon was sold to Jim Butler (no relation to the Jim Butler who discovered silver at Tonopah), who had married one of the Reed daughters. O.K. Reed's life ended sadly. His wife, Maude, left him, his daughters had graduated from high school, his vast land holdings were eroded, and, most tragically, little O.K., his pride and joy, died of leukemia at the age of thirteen. O.K. Reed was a broken man. His son-in-law Ed Slavin believes that O.K. eventually died of a broken heart, thus ending a remarkable episode in the history of southcentral Nevada (Slavin, 1987, 1988).

Problems of Modern Ranchers

Ranchers such as O.K. and Ed Reed faced many hardships that have been alleviated by modern methods of transportation and communication and better-constructed and heated homes. However, modern ranchers in the Tonopah area face many problems their predecessors did not encounter. Beginning in the 1950s, ranchers in the southern Kawich area, as well as miners such as Ed Slavin, lost grazing rights and mining properties when the Tonopah Test Range and Nevada Test Site were cordoned off. Also during the 1950s, atmospheric testing of atomic weapons resulted in fallout on many ranches east of Tonopah (Fallini, 1987).

In recent years, dramatically increased numbers of wild horses are competing with cattle for forage on the range. Laws protect the horses, but ranchers feel the unrestricted growth of their numbers works an unnecessary hardship and destroys rangeland. For example, when the wild horse legislation was passed, there were approximately 170 head of horses on the Fallini range. Over the years the number of horses increased sharply; only a lawsuit, which reached the United States Supreme Court, resulted in the Fallinis being able to reduce the size of the herd grazing in competition with their cattle. Al-though the suit was successful and has resulted in the removal of more than 1000 head of horses from the Fallini range, it was expensive, and the Fallinis believe the horses did permanent damage to the land. Moreover, the court decision applies only to the Fallinis. Constant squabbling with the U.S. Bureau of Land Management, often over the most unpredictable issues, and the ever-present threat of further government retraction of federal land to which ranchers hold grazing rights, are constant worries to ranchers. These factors, ranchers say, take some of the pleasure out of ranching (Fallini, 1987).

In fairness, it has to be pointed out that federal govern-mental agencies, including the U.S. Bureau of Land Management, are required to administer federal laws when managing Nevada's publicly owned range land. Such laws are often the outgrowth of demands made by different constituencies that are not necessarily sympathetic to local ranchers' interests. These constituencies do not always appreciate the role of ranching in the life and traditions of Tonopah-area residents. Thus, there is conflict regarding how the range should be best used, and federal agencies and their local officials are some-times caught in the middle as local ranchers fight for their very existence. Wild horses are a case in point. Urban-oriented pressure groups advocate for the rights of wild horses to use the range, and they succeed in getting laws passed protecting these horses. The governmental agencies must enforce these laws, much to the consternation and economic detriment of the ranchers.

Problems extend beyond ranching concerns. For many years the Fallinis have owned Warm Springs, located on Highway 6 about 50 miles east of Tonopah. Area residents can remember when a comfortable bar and restaurant was located there and a traveler could fill up

on gas and go for a swim in the natural hot-water swimming pool nearby. For decades Warm Springs was a gathering place for locals as well as travelers. Unfortunately, because of the high costs of insurance and the ever-growing intricacies of gambling and liquor laws, the facility can no longer be operated profitably; so it sits closed, with the bar, restaurant, and swimming pool unavailable to local residents and travelers (Fallini, 1987).

Childhood on a Ranch

Ranchers' children were usually required to be productive members of the family unit, but there was never a shortage of pleasurable activities for them. Inez Sharp Finnegan, who lived on a ranch located east of Tonopah, tells of attending school at Currant Creek after 1910. Students came from the nearby ranches. In high school, subjects included English and grammar, history, typing, shorthand, home economics, and mathematics. The home economics kitchen consisted of a heater in the classroom on which different dishes, including fudge, were prepared (Finnegan, 1987:21). Community dances were held in the school. There was an organ, and men from the neighborhood played the violin (Finnegan, 1987:24). Live music was preferred to phonograph records in the years before 1925, Finnegan reports. These dances, which were held about every two weeks, especially during the school months, would last until daylight. Often the floor was waxed and sprinkled with cornmeal. The dance was usually accompanied by a potluck meal, including cakes, pies, sandwiches, salads, and fruit (Finnegan, 1987:24-25).

Occasionally there were picnics. Sometimes church services (although there was no church building) were held in conjunction with a picnic, usually at someone's ranch. Nondenominational religious services involved singing that was sometimes accompanied by musical instruments (Finnegan, 1987:25-26).

In wintertime there was sledding on the hills on sleds made of barrel staves with boards nailed to them. There was also skating on frozen ponds. The children had no skates, but they moved as though they were dancing on the slick ice, running, then pulling up one foot and scooting along on the other. Sometimes the parents let them slide down haystacks for fun, and occasionally there were hayrides. The best seat on the hayride was a matter of debate—in back with your feet hanging over or on top of the haywagon. Horseback riding was a treat for some girls, although boys rode so often attending cattle that they were generally tired of it (Finnegan, 1987:25-27). In Smoky Valley there were celebrations associated with the Fourth of July and other holidays. There would be three-legged races, and small rodeos were frequently held at Darrough's Hot Springs (Humphrey, 1987:79).

But young people had a great deal of work to accomplish, as Inez Sharp Finnegan recalls: "from cooking and scrubbing clothes and floors and tending garden and milking cows, carrying feed to the pigs, pitching hay and helping tend babies and sewing, and quilting.... We learned to do all of it—things that we would need" (Finnegan, 1987:27). The laundry was done at first with homemade soap, and in later years they used the yellow Fels Naptha, which could be effective in much colder water. They made rope from the hair of horses' tails, pulling one hair at a time so as not to excessively annoy the horses. When not occupied with chores, children browsed through the ubiquitous catalogs, such as Sears, Roebuck and Montgomery Wards, from which dreams could be spun (Finnegan, 1987:28-32).

Diet on a Ranch

Inez Sharp Finnegan has described the family diet during her childhood in Railroad Valley in the years around 1915: Meat was a dietary staple. In the summer, however, because of difficulties of preserving meat, the family did not butcher, but relied more on chicken and fish. Occasionally a jackrabbit would be killed and eaten (before rabbits became diseased). During the winter, pork was placed in strong salt water and used before warm weather returned. Of course, during the summer, homegrown vegetables were plentiful. Both potatoes and corn were grown, as were carrots, Jerusalem artichokes, cabbages, and turnips. One of the children's first outdoor chores was to help irrigate and weed the garden and to carry kindling into the house. The Sharp family dried corn for the winter. Rather than devote several days to the preparation of dried corn, they boiled more corn than was needed for a meal. The kernels were removed from the unused corn with a sharp knife, placed on a clean, white cloth and covered with a screen and allowed to dry in the sun. Fruit was dried in the same way, and they also dried meat for jerky. In the winter the corn was placed in hot water and simmered until it swelled; it was eaten with milk, butter, salt, and pepper. The dried corn was never stored in cans where it would mold, but was placed in a muslin sack where air could get to it (Finnegan, 1987:40-43).

Apples and prune-plums were purchased from orchards at Currant Creek. Apples were purchased at first by the half-ton and then as the children got older, by the ton. A special brick building was built with bins for storage. Inez's father would carefully handpick the apples himself; they had to be stored free of bruises if they were to keep. He placed a quilt and a sheet in the bottom of his wagon and carefully placed them there, then unloaded them with care into the bins. Sometimes apples were dried on the roof. Beans and split peas were purchased from neighbors and dried. There was never enough stored fruit, so canned varieties were often purchased. Fresh milk and cream were always available on the ranch, and bread was baked an average of twice a week. Sometimes people went pine nut gathering in the fall and used the occasion to haul firewood home from the mountains (Finnegan, 1987:40-43).

Cowboys who were riding after cattle would often stop in for a meal. Finnegan says that there was a rule about eating at other people's houses in the West at that time: You never ate at an enemy's table. This prevented the risk of dying of "food poisoning." Thus, it was always assumed that if you ate at somebody's house you were friends with them (Finnegan, 1987:43-44).

Medical Care

Although doctors were readily available in Tonopah, residents of the outlying areas often had difficulty in obtaining medical treatment. Many of the home remedies described here date to approximately the 1920s and possibly earlier. Josephine Foster (1987:99) recalls that her mother made a cough syrup from the juice of onions and sugar. One treatment for smallpox involved taking two or three drops of carbolic acid in a glass of warm water each morning, accompanied by a diet of fruit juices and light food (Finnegan, 1987:61). Colds and problems

with the lungs were treated with an ointment consisting of olive oil and turpentine, which was rubbed around the neck and chest and under the arms. A mixture that included ginger was used for treatment of menstrual cramps. Many women had their own contraceptive "recipes." Inez Sharp Finnegan recalls that one of her aunts had three such recipes, and that she had a baby to show for each one (Finnegan, 1987:59-61).

Outside help was often needed for medical emergencies. Inez Sharp Finnegan was born in 1905, and she remembers having pneumonia when she was eight years old and living in Railroad Valley:

They didn't know why I didn't get up that morning; I couldn't even turn my head. He [her father] came in to see why I wouldn't get out of bed. He took one look at me, spoke to me, and I blabbed some... neither he nor I even knew what I said, but he took one look at my eyes and out he went. He got the buggy team and went to Currant Creek. It was about 20 miles. There was a woman there that would go as a nurse when she was needed. He hired somebody with a car to go to Preston, over in White Pine County, and get the woman doctor, and then Mary, the nurse, went home with him in the buggy to be there. Then they brought the doctor on down (Finnegan, 1987:46-47).

Dr. Windows traveled 60 miles to little Inez's bedside. It is reported that Dr. Windows had been put through medical training by neighbors in the area in order that they would have medical care. She returned after her training, practiced medicine, and raised her own family in the area. She was highly regarded in the community and kept her promise to her neighbors, practicing medicine there until the older folks either moved or passed on, and then she moved to Ely. A midwife, Margaret Taylor, served the women in the Currant Creek-Railroad Valley area. She would be brought to the home near the time the baby was due and would stay for two or three weeks, taking care of the other children in the household and assisting in the cooking and cleaning (Finnegan, 1987:47-49).

CHAPTER 11 The Military

For Tonopah, 1940 was a watershed year. Mining production had dropped precipitously in 1930, risen gradually between 1931 and 1937, leveled off until 1939, and then, following the second Belmont fire, plunged to deep Depression levels in 1940. Underground mining production never recovered in the Tonopah area. Ironically, in the year the old mining-based economy died, a new economic force emerged for the community.

The Tonopah Army Air Base

In 1940, the U. S. Army began construction of the Tonopah Army Air Force Base about 7 miles east of town, marking the beginning of a dependence on the United States government and its military for the community's economic well-being.

After Germany attacked Poland in September 1939, General Headquarters Army Air Force at Langley Field, Virginia, began considering the desirability of improving the airdrome at Tonopah and obtained a large tract of land for gunnery and bombing practice. In October 1940, approximately 5000 square miles of land, roughly 4 percent of the state of Nevada, was transferred from the Department of the Interior to the War Department. Construction of a new airfield began in early 1940, sponsored by the Civil Aeronautics Administration and financed in part by the Works Progress Administration. Condemnation proceedings on private holdings within this vast area were instituted and resolved in August 1941 (Ballantyne, 1987:inside back cover).

The base, which was ready for occupancy by July 1942, came under the jurisdiction of the Fourth Air Force and would be used for training purposes. Facilities included runways, mess halls, and a hospital. By January 1943, 1779 enlisted men and 227 officers were stationed at the field. Training was provided on the Bell P-39 Airacobra, which was being used in the Pacific by the U.S. Army Air Force. Because of the high loss ratios of both planes and pilots in crashes at the base (possibly because of the high elevation of the base or design problems with the planes), in mid-1943 it was decided that the base would be used to train crews of B-24 Liberators (Ballantyne, 1987:inside back cover).

In November 1943, the Air Force began \$8 million worth of improvements on the facility. These included construction of a concrete apron 600 feet wide and 1 mile long; two main runways 150 feet wide and a total of 4000 feet in length; two taxiways totaling 10,000 feet; a reinforced concrete water storage reservoir with a capacity of 1 million gallons; approximately 140 buildings of all types and sizes; a complete sewage disposal system; and an 8-inch, 14-mile line of pipe to supply water from wells at Rye Patch ("Tonopah Army Air Force Expansion," 1987:4).

On average, 1000 men working one shift a day were employed on this part of the construction. There was a shortage of skilled labor, but unskilled recruits were soon taught the necessary skills. Prior to the installation of booster pumps at Rye Patch, it was necessary to truck water for the project from Millers, 27 miles away ("Tonopah Army Air Force Expansion," 1987:4). In September 1943, half the personnel stationed at the base were moved temporarily

to Bishop Army Air Field in California so there would be enough housing for the large numbers of construction workers. Additional quarters and barracks, a new post exchange, supply buildings, day rooms, crash stations, warehouses, operations buildings, a hangar, and a school building were also constructed. By November 1943, most of the work had been completed and the men who had been sent to Bishop returned (Ballantyne, 1987:inside back cover).

In the summer of 1944, in a move that was to preview future uses of the Nevada desert, a special weapons test organization from Wright Field, Ohio, tested glide bombs and other devices at Tonopah. The training on B-24s continued until the end of the war; by October 1944, there were 66 B-24s in use in that training program, and there were 5273 enlisted men and 1264 officers stationed at the base in addition to a large number of civilians. By March 1945 the number of personnel was down to 3707 enlisted men and 437 officers (Ballantyne, 1987:inside back cover). A week after the fighting ended in the Pacific, the Fourth Army Air Force placed the Tonopah base on inactive status, and in 1948 the base was deactivated and materials sold for scrap. Runways and four hangars in various stages of disrepair are all that remain of the base (Ballantyne, 1987:inside back cover).

When Tonopah residents first heard that the government planned to build an air base nearby, they could scarcely believe it. Tonopah was a quiet little town. "What a lot of malarky," they thought (Banovich Lydon, 1987). The next thing they knew, the air base was under construction. On-site construction provided jobs for local residents, and the influx of large numbers of workers provided a major stimulus to the town's economy. Anyone who was willing to work could find a job, either on the site or in the bars, restaurants, and other business establishments serving the workers in town. The bars and gambling establishments, including the Tonopah Club, the Ace Bar, the Coors Bar, and the Mizpah Hotel, did overflow business. There was prosperity for the town's merchants. Downtown was described as a "crazy house" and the restaurants often had standing-room-only crowds (Banovich Lydon, 1987). Service personnel were housed as far away as the Goldfield Hotel. Many local families took on boarders or opened their homes to service men and their families. Housing conditions were generally poor, with people living in anything they could get, including refurbished garages and chicken coops. Conditions were particularly primitive for black families, who lived in a segregated section on the west side of Water Street and west of Corona Avenue ("Housing Crisis," 1987:2). A U.S.O. recreation room was established in 1942; in early 1943 a larger facility was opened at the Tonopah Civic Auditorium at Brougher and Central avenues. A separate U.S.O. for black service personnel was opened at the old post office building on North Main Street.

Kayo Banovich Lydon was employed as a junior hostess in the enlisted men's service club on the base. The base had two such clubs, one for whites and one for blacks. She was employed at the one for whites, and because she was distressed by the concept of racial segregation, particularly for men fighting for their country, she permitted entry to both whites and blacks. Although there was no protest against her desegregation policy—she received negative comments only from one young Southern soldier—she has vivid memories of the treatment many blacks received at the base, including severe beatings; some may have even been murdered (Banovich Lydon, 1987).

With so many single men in town, unmarried local girls were at a premium. Any girl could take her pick and have as many boyfriends as she wanted. During this period, many close

friendships that continue today were forged between Tonopah residents and the airmen. Local boys, however, often resented the airmen "stealing" their girls (Banovich Lydon, 1987).

Closure of the air base at the end of the war produced a rapid decline in the town's economy. Mining activity remained small and sporadic, and tourism was still largely undeveloped. People Who remained in Tonopah had to have survival skills. If one did not own a ranch, a profitable commercial establishment, or find some government employment, a mixture of methods had to be used to keep a roof over one's head. This mixture usually involved mining, day labor and odd jobs, and when possible, some type of entrepreneurial activity. The closure of military bases throughout the country opened up opportunities to salvage government equipment. Many in Tonopah salvaged buildings from the Army Air Base. Sometimes entire structures were moved to town. More commonly, people dismantled buildings and used the lumber to construct homes and garages. Some people in town took advantage of the sale of buildings from other bases and moved buildings from the Hawthorne Ammunition Base and even from as far away as San Diego (Terrell, 1987).

The Tonopah and Goldfield Railroad had prospered between 1935 and 1939, but it had gone into the red after the closure of the Belmont shaft following the fire of October 1939. With the construction and operation of the air base, the railroad was given a new lease on life. In 1942, controlling interest in the railroad was sold to Dulien Steel Products for \$226,768. In October 1946, the railroad discontinued hauling ore from Tonopah and later the track was torn up (Carpenter, 1953:138). Jeanne Potts, an employee for the Tonopah and Goldfield Railroad in August 1945, recalls, "the day the war ended, I was out of a job. It was that quick" (J. Potts, 1987).

The railroad closure after the war placed an added burden on those who engaged in mining. Without the railroad, and in the absence of anything but very small, privately owned mills, those who wished to mine were more and more often forced to mine higher-grade ores and truck them either to the Kennecott Smelter at McGill, Nevada, 170 miles northeast of Tonopah, or even farther, to the Salt Lake City, Utah, area (Terrell, 1987; R. D. McCracken, 1988).

During World War II the Tonopah mines did not close down completely, as did many gold and silver mines in other parts of the country. The high silica content of the Tonopah ores was needed in the refining of ores at the nation's smelters. Men who were mining essential minerals—which included silica—were given draft deferments. Miners who were not employed in mining such minerals were drafted (Terrell, 1987; Coombs, 1990).

The Tonopah Test Range and the Nevada Test Site

After the closure of the Tonopah Army Air Base and liquidation of most of its facilities in 1948, there was sporadic activity at the military facilities east of town. During the late 1950s, this activity consisted of construction of housing for high-speed cameras, control facilities, and large concrete pads for bomb-drop tests. Some badly needed jobs were provided for the community, but the overall impact was not great. It was during this period that radar stations were constructed atop mountains to the immediate south and to the north of Tonopah.

Although the facility atop Brougher Mountain to the south was scarcely used by the air force, the radar site to the north necessitated stationing several airmen in Tonopah.

In spring 1949, government officials stated that it would take a national emergency to justify atomic testing within the borders of the United States. Such an emergency arose in the summer of 1950 when the United States became involved in the Korean conflict, shortly after the detonation of an atomic bomb by the Soviet Union (Titus, 1986:55). The site selected for testing was part of the old Las Vegas-Tonopah Bombing and Gunnery Range located in Nye County. At first the ground was leased from the air force, but it was permanently with-drawn on February 19, 1952, under Public Land Order 805, being set aside for "nuclear testing purposes." The selection of southern Nevada for the purpose of atomic testing had the support of Senator Pat McCarran (Titus, 1986:56). The first series of tests, code-named "Operation Ranger," took place between January 27 and February 6, 1951 (Titus, 1986:58). Initially, tests were conducted in the atmosphere; by the time the limited test ban treaty was signed in Moscow on August 5,1963, all tests had been moved underground (Titus, 1986:65).

Between 1951 and 1989 approximately 700 nuclear de-vices were detonated at the Nevada Test Site (U.S. DOE, 1989). This facility has been a major factor in the economies of Nye and Clark counties, either directly or indirectly involving 9 percent of the workforce in southern Nevada (Titus, 1986:68).

Knowing little of the potential adverse effects, most southern Nevadans, including residents of Tonopah and the surrounding area, supported the nation's nuclear testing program. A 1961 report by E.G.&G., the principal Test Site con-tractor, stated: "There have been so many detonations of nuclear devices at the Test Site in the past ten years that the community [of Las Vegas] is completely accustomed to, and unconcerned about, radiation hazards from such operations" (Titus, 1986:100). In 1963, a public opinion poll conducted in Las Vegas showed majority support for continued atmospheric testing; people believed that the Soviet Union could not be trusted to uphold a test ban treaty (Titus, 1986:100). Indeed, a protest demonstration commemorating the 33rd anniversary of the first atmospheric shot at the Nevada Test Site, on January 27, 1984, drew only 30 demonstrators to the Federal Building in Las Vegas (Titus, 1986:100).

Strong support by southern Nevadans should not be construed as unanimous support for atomic testing in Nye County, however. Seventy-five residents of the Tonopah area signed a petition in 1957 asking that "the atomic tests be suspended, or that some equally positive action be taken to safeguard us and our families." Copies of the petition were sent to President Dwight Eisenhower and members of the Nevada congressional delegation (Titus, 1986:99).

Tonopah area residents have vivid memories, both positive and painful, of atmospheric testing of atomic weapons. During the 1950s, most of the atomic shots were detonated in the hour before dawn. Usually, they were announced in advance on the radio. Residents of Tonopah sometimes drove to Salisbury Wash and the Warm Springs Summit on Highway 6, east of Tonopah, to watch the atomic explosions in the pre-dawn sky. They can recall vividly the flashes of beauty and the awe they felt for the incredible power from splitting the atom. I recall watching many such explosions in the predawn morning when I lived at the Reveille Mill during the 1950s. My most vivid memory concerns a mid-day shot, however. We were working on repairs at the old mill and took a noon break and went into the shack to eat and escape the heat. Words cannot describe our astonishment when we exited the shack in the early

afternoon: The door faced south toward the Test Site, down the Reveille Valley, and in the direction of Reveille Peak, clearly visible, a perfectly formed mushroom cloud was rising above the horizon (R. D. McCracken, 1988).

During these years, Atomic Energy Commission officials gave area residents radiationmeasuring dosimeter badges to wear. The badges were picked up periodically by the officials and new ones were distributed. These badges were never accompanied by an explanation; in our naivete we looked at them as sort of a joke and humorously refused to wear them, hanging them on our bedsteads instead. (Years later a Test Site official said the bedstead was probably as good a place as any to keep them [R. D. McCracken, 1988].)

People living to the east of Tonopah in Nye County were exposed to radiation, and it was no laughing matter. During this period there was a uranium boom in the western United States, and prospectors were combing the hills looking for indications of deposits of the valuable mineral. Uranium prospectors active in the area believed they really had struck something when even the sagebrush in the vicinity of the Reveille Mill and the east side of the Kawich Range gave high readings on their Geiger counters and scintillators. Little did they realize that this was fallout from nuclear testing. But residents were never informed of its possible dangers. More than one contaminated cloud from atmospheric nuclear testing was observed by residents of the Reveille Range and Kawich Range area; clouds moved up the valley following some detonations of nuclear devices (Fallini, 1987; R. D. McCracken, 1988).

Years later cancers among area residents and those downwind in southeaster Nevada and southwestern Utah were attributed to radiation exposure from the tests, and the federal government was sued for damages. Although these lawsuits were initially successful in the lower courts, in 1988 the U.S. Supreme Court reversed the lower court decisions, ruling that the U.S. government was immune from such lawsuits. The entire matter has left many individuals bitter toward the government (Fallini, 1987.)

Regardless on one's feelings about nuclear testing, it has meant a great deal to Nye county economically. Many in Tonopah have benefited from jobs on the Test Site. for example, in the early 1950's Norman "Curly" Coombs was working in Las Vegas, sinking 100-foot shafts for the foundation of the Sahara Hotel. One evening he was talking to a fellow in the Westerner who showed Curly the paycheck stub from his job at the Test Site. Coombs was amazed at the money the man was making and eventually obtained a job at the site himself (Coombs, 1990). Many more jobs opened up for miners as the government moved from atmospheric to underground testing in the late 1950's. Long tunnels were drilled under Ranier and Aqueduct mesas and nuclear devices were exploded; the radiation and other effects of the blast could be better contained underground.

during the summer of 1958, there was a large expansion of the tunnel-drilling force at the Test Site. The camp at Area 12 was established. miners who did not wish to make the long commute from Las Vegas, Amargosa Valley, Pahrump or Beatty stayed at the camp and returned home on weekends. Many miners considered the camp at Area 12 home for more than ten years - in some cases, closer to twenty. Other workers came and went. A person could work at the Test Site for a time, build up some savings, and then go prospecting or mining. Later, when his funds were low, he could return to the Test Site. Many of the older miners and construction workers at the Test Site were used to working at jobs where profit mar-gins were small to nonexistent and were critical of the waste of material and labor that they saw at the Nevada Test Site.

Some atomic devices were exploded in horizontal tunnels, others at the bottom of deep vertical shafts. The vertical shafts were 5 feet in diameter and went down many hundreds of feet. Sometimes tunnels were driven out from the bottom of the shafts, other times the shaft bottoms were enlarged. After the atomic device was blasted, there was a recovery stage that involved drilling into the blasted area to determine effects on equipment, instruments, and the rock (R. G. McCracken, 1988).

Perhaps the most remarkable of all the deep holes drilled for atomic testing were between Hot Creek and the old town of Morey at what the government called C-Site (D. Potts, 1989). Two vertical holes, 10 feet in diameter and 5000 feet deep, were drilled. Though neither hole was ever used, one is completely cased and ready to go. Giant bits were used in the drilling. The bit itself was 10 feet in diameter, with a series of different cutters attached to it. If the drillers hit extremely hard rock they would put on button-bit cutters made of tungsten carbide. "They might only go 4 or 5 feet and then come out of the hole and put on a cone-type bit which would then continue to drill," explains Don Potts (1987), who worked there. The torque on the drills was tremendous—thousands and thou-sands of pounds. At first there were no safety devices on the drills, and if they broke off everything ended up in the hole and had to be retrieved. The drilling platform was 50 or 60 feet above the ground. Potts recalls how awesome it was to peer down a gaping 10-foot hole thousands of feet deep (D. Potts, 1987).

When tunneling activities expanded in Area 12 in 1958, local men who wished to work at good-paying jobs on the Test Site were recruited. One of the "man-catchers," as they were called (Coombs, 1990), was William P. Beko, now a Nevada district judge, who served as Nye County district attorney at the time. I vividly recall Beko driving down Main Street in Tonopah in his jeep, holding papers in one hand. He pulled over to the corner at Bryan Avenue between the post office and McGowans, now the A-Bar-L, and asked my father and me if we wanted to go to work at the Test Site. We had heard vague rumors that there might be good jobs there; both of us, being out of work and broke, jumped at the chance, as did others in town (R. D. McCracken, 1988).

During the 1970s and 1980s activities on the Tonopah Test Range expanded and provided additional employment opportunities. Expansion became especially pronounced during the 1980s during the military buildup of the Reagan administration. A squadron of Stealth fighters, a type of aircraft supposedly invisible to radar, is based on the range. Numerous other activities take place there, but the high levels of secrecy make elaboration impossible. When I asked the commander of Nellis Air Force Base in Las Vegas in 1987 if his staff would be willing to make a presentation to the people of Tonopah outlining, in general terms, the Tonopah Test Range's economic impact on the community, I was told that as far as Nellis Air Force Base and the U.S. Air Force was concerned, Tonopah "did not exist." He refused to make the presentation (R. D. McCracken, 1988).

The Proposed Yucca Mountain Repository

Since the U.S. Congress passed the Nuclear Waste Policy Act in 1982, there has been a great deal of activity by the U.S. Department of Energy to determine the geotechnical suitability of Yucca Mountain to be the nation's first high-level nuclear waste geologic repository. Yucca Mountain is located approximately 15 miles southeast of Beatty, Nevada, on land controlled by the federal government. The facility must be designed to safely isolate large quantities of highly toxic and dangerous nuclear waste from the human environment for 10,000 years, and the DOE will not know if the location is suitable until site characterizations are completed in approximately 1996 (Bradhurst, 1988).

If the site is judged to be geotechnically suitable, the DOE must then receive a permit to construct and operate the proposed nuclear repository from the Nuclear Regulatory Commission. Under even the most optimistic scenarios, it is not expected that a repository would be operational until the first decade of the twenty-first century (Bradhurst, 1988).

Resentful of Nye County's effort to actively participate in the federal government's repository siting program and desirous of receiving federal funds earmarked for Nye County, some state politicians prompted the 1987 Nevada State Legislature to remove from Nye County's jurisdiction a 12-mile-square block of land and create Bullfrog County (which would have no residents). The name relates to an unsuccessful at-tempt to divide Nye County during the heyday of Rhyolite in 1906. The creation of Bullfrog County has been ruled unconstitutional in the courts (Bradhurst, 1988).

Late in December 1987, the U.S. Congress passed legislation that superseded the 1982 Nuclear Waste Policy Act and singled out Yucca Mountain as the prime candidate site for storage of high-level nuclear waste. Supporters of the 1987 act agree that the government's singling out Yucca Mountain for the possible storage of high-level nuclear waste is sound given the area's aridity and sparse population, the large amount of nuclear testing that has taken place at the Nevada Test Site over more than 35 years, and the necessity of restricting the area for thousands of years to come regardless of future waste storage projects.

Those opposed point out that there is a big difference between the relatively small levels of waste produced through nuclear testing and the large amounts planned for storage. They argue that most nuclear waste is produced in the eastern United States and that Nevada has done enough for the country with the atomic testing program and its many military installations. Moreover, they fear the unknown problems such a facility might present. The new law, however, does seem to make a Nye County site for a high-level nuclear waste facility a strong possibility because it focuses on Yucca Mountain (Bradhurst, 1988).

CHAPTER 12 Statesmen and Politicians

The Tonopah boom produced a number of politicians who went on to dominate Nevada politics for two generations. Some came from the East coast to Nevada by chance or on a whim. Once in Nevada, they became involved in mining and related enterprises. They remained and contributed much to the growth of the state.

Tasker L. Oddie

Of these figures, the one closest to the Tonopah boom was Tasker L. Oddie. The Oddie family was prominent in New York. Henry Meigs Oddie, Tasker's father, was a senior partner in a New York stock exchange firm with offices on Wall Street. Tasker traced his ancestry to Henry Meigs, who had served in the U.S. House of Representatives from New York between 1819 and 1821 (Chan, 1973:17-18). Tasker Oddie was born in Brooklyn on October 24, 1870, and grew up in East Orange, New Jersey, where his family moved shortly after his birth. He attended public schools there. At the age of 16 his parents sent him to a cattle ranch in Boone County, Nebraska, hoping the change would "do him some good" (Chan, 1973:18). While in Nebraska young Oddie developed physical strength, learned horsemanship, and acquired a "longing for the western country" (Chan, 1973:18).

He returned to New York, graduated from law school in 1895, and soon was working for a New York real estate concern owned by a member of New York's elite "four hundred" society, which had business ventures in Lander and Nye counties in central Nevada. In 1898 Oddie found himself in central Nevada where he was directed to report on the family's mining operations (Chan, 1973:19). In 1900 the young man resigned from the company and turned to mining in the Belmont area, working both the Courthouse Mine and the abandoned Barcelona quicksilver mine northwest of Belmont (Chan, 1973:20-21). From 1898 until 1900, Jim Butler had been district attorney of Nye County. On November 6, 1900, holding a law degree (which was uncommon in rural Nevada then), Oddie was elected district attorney, succeeding Butler (Chan, 1973:25-26).

While serving as district attorney, Jim Butler had collected mineral samples from a ledge in Sawtooth Pass south of Belmont. Butler had shown the samples to Wilson "Wilse" Brougher, a saloon owner in Belmont and the Nye County recorder and auditor, but Brougher (like Frank Hicks, who ran an assay office in Klondike) had not been impressed. Unable to afford the price of an assay, Butler turned to his tall, lawyer-prospector friend, Tasker L. Oddie. He offered Oddie no payment, but Butler's wife, Belle, who is said to have controlled the family finances, offered Oddie an interest in the claims in return for the assays. Trusting no one in Belmont, Oddie transported the samples to Austin and had them run by Walter Gayheart, an assayer whom he knew there. In addition to running an assay office, Gayheart doubled as principal of the Austin Public School and a teacher in the high school. Gayheart ran the assays and found high silver values (Chan, 1973:14-15). After some delay, Jim and Belle Butler, Walter Gayheart, and Oddie proceeded to the western part of Nye County, where Butler and his wife had earlier located several claims. Lacking a wagon and a good team of horses, they convinced the skeptical Brougher to contribute those items for a share in the venture. By December the miners had produced 2 tons of ore that yielded \$500 (Chan, 1973:15-16). The miners continued at the operation and the town of Tonopah began to grow.

In July 1901, the group sold out to Philadelphia capitalists, but Oddie stayed on as general manager of the Tonopah Mining Company. A second company, the Tonopah Belmont Development Company, was formed by the same Philadelphia capitalists on ground that Oddie had staked out adjacent to the original Butler claims (Chan, 1973:27-28). Oddie invested in other ventures in the Tonopah area and quickly became wealthy. Single and rich, he was also the target for opportunistic women, and he was an easy mark. It is said that Nevadans of that era often jested that it was fortunate that "Tasker had not been born a girl, for he could never say 'Nor (Chan, 1973:29). In December 1903, he married a young New York divorcee, and a year later the marriage ended in divorce with Oddie agreeing to pay his wife \$250,000 to "stop contesting the divorce and to stop calling herself Mrs. Tasker L. Oddie" (Chan, 1973:30).

In 1904, Oddie was elected to the Nevada State Senate as a Republican. His career in the state Senate was uneventful, described by his biographer Loren Chan as "uninspired." During his single four-year term he tended to side with the mine operators rather than the miners and was friendly with George Wingfield and George Nixon, who possessed substantial interests in Goldfield. Unfortunately for Oddie, the financial Panic of 1907 pretty much wiped out his wealth and he had to be concerned about earning a living for the rest of his life (Chan, 1973:33). In 1910 he ran as a Republican and was elected governor (Chan, 1973:46). He ran for re-election in 1914 and was defeated by Emmet D. Boyle (Chan, 1973:65). As governor, Oddie is remembered for his stands against legalized gambling and easy divorce (Chan, 1973:64).

In 1920, Oddie was elected to the U.S. Senate as a Republican. He was re-elected in 1926. As a U.S. senator he was part of the Wingfield machine, which he faithfully represented (Chan, 1973:170). In 1932 he ran for a third term but was defeated by Pat McCarran, who had also been active in Tonopah politics.

Oddie retired in the Reno area and spent time in his later years around San Francisco (Chan, 1973:166). He died on February 17, 1950, at the age of seventy-nine, and is buried in Carson City. Chan summarizes Oddie's political career this way:

As governor, he was especially active in promoting measures dealing with property reassessment, workman's compensation, and industrial safety. As senator, he supported the Fordney-McCumber tariff; proposed federal aid highway construction legislation for the arid west; insured the establishment of a naval ammunition depot for the Pacific Coast states at Hawthorne, Nevada; and fought for the building of Hoover Dam. Both as governor and senator, he served his state as best he could. When he outlived his usefulness in light of changing political and economic conditions, he was turned out of office (1973:171).

Key Pittman

Key Pittman was born on September 19,1872, in Vicksburg, Mississippi, the son of William Buckner Pittman and Katherine Key Pittman. His mother was said to be a direct descendant of Francis Scott Key (Israel, 1963:5-6; Myles, 1972:111). He was the oldest of four sons, all of whom spent some portion of their life in Tonopah. When his father died in 1884 Key was twelve. He and his three younger brothers went to live with their maternal grandmother on her cotton plantation in East Carroll Parish, Louisiana. (Another source says that the Pittman sons went to live with an aunt and uncle [Myles, 1972:111].) Key enrolled at Southwestern Presbyterian University in Clarksville, Tennessee, but he was not an outstanding student. He was forced to withdraw after catching typhoid fever in his third year. He was awarded an honorary doctorate in 1919 (Israel, 1963:7-8).

While recuperating from the fever at his aunt's home in Tuscaloosa, Pittman decided, on what he later recalled was an impulse, to move west. In the spring of 1890, at the age of eighteen, he ended up in Seattle, Washington, and was hired as a clerk by one of that state's most successful lawyers. He read law under his employer's guidance and in 1892 was admitted to the Washington Bar (Israel, 1963:8-9).

In 1897, after growing discouraged with the practice of law in Washington, Pittman headed for the Klondike (Israel, 1963:9), just ahead of the gold rush to the far north. Although he was not admitted to practice before the Canadian Bar, he gained his first experience with mining litigation in Dawson in the Yukon (Israel, 1963:12). In 1898 he met his future wife, Mimosa June Gates, when their two dog teams became en-tangled. Pittman moved to Nome in 1899 and married Mimosa, remembered as "one of the most vivacious and beautiful young women in the town" (Israel, 1963:13). As a result of his legal training Pittman became prominent in Nome politics. (Interestingly, both Wyatt Earp and Tex Rickard, who later spent time in the Tonopah-Goldfield area, had bars in Nome [Israel, 1963:15-16] .) In the fall of 1901 the Pittmans left Alaska because of Mimosa's ill health; they intended to return the next spring, but did not (Israel, 1963:16).

That winter Pittman heard of the big strike in the Tonopah area of Nevada, and in March 1902 he left for the booming camp (Israel, 1963:16). Although short on capital, Pittman recognized that there was a need for a lawyer in the area. He raised \$200 to build a two-room cabin, promising Mimosa, who remained in San Francisco, "I will succeed! I will succeed!" Pittman's reputation as a mining lawyer had preceded him and he prospered. Soon he was doing a "splendid business" and in a matter of months had acquired an extensive mining and corporate practice. Within two years he was a wealthy man, successful in his speculations and his law practice (Israel, 1963:16-18).

He rose to political prominence early, first as a member of the Silver Party and later as a Democrat. By 1908 he actively campaigned for political candidates and accepted speaking invitations throughout the state (Israel, 1963:21). By 1907 the industrial magnate Charles M. Schwab and the Southern Nevada Telephone and Telegraph Company were numbered among his clients. He had extensive holdings in the principal mining properties of Nye County, including the Tonopah Extension (Israel, 1963:20).

By 1909 there were hints that Pittman should seek the Democratic nomination for the U.S. Senate, and the following year, at the Jim Jeffries-Jack Johnson prize fight in Reno on July 4,
Governor Denver S. Dickerson asked him to run for the Senate as a "sacrifice candidate" and Pittman accepted (Israel, 1963:22). His Republican opponent was the incumbent, George Nixon, who had acquired a great fortune in mining in the Goldfield area, with investments said to number in the tens of millions (Israel, 1963:23). Pittman began his political campaign in August with a speech to a capacity crowd of 500 in the Tonopah Miner's Hall. He did not win the election and attributed his defeat to Nixon's money and the Southern Pacific Railroad. Pittman claimed these two entities spent nearly a quarter of a million dollars each on the election. In the summer of 1912, Senator Nixon died and Pittman was elected to fill his term (Israel, 1963:23-25).

In Washington Pittman's principal concern was to help the mining interests, especially silver (Israel, 1963:131). Pittman was elected to five terms in the U.S. Senate and served consecutively from 1912 to 1940. During the last eight years of his stay he was chairman of the powerful Senate Foreign Relations Committee.

His relationships in Washington created a powerful and effective voice for Nevada and western mining interests. He was the driving force behind the passage of the Pittman Act of 1918, which provided a subsidy to domestic silver producers. In 1916 the price of silver had averaged 59 cents an ounce, and the act guaranteed miners \$1 an ounce. In 1919 the price reached an unprecedented \$1.38 per ounce (Israel, 1963:78). Pittman was also a key figure in the enactment of changes in government policies in 1933 leading to an increased price for silver. As expected, production figures in Tonopah rose substantially with the policy change. Residents of Tonopah were jubilant:

In Tonopah, Nevada, they danced in the streets in one of the wildest celebrations seen in that mining town. Bartenders fulfilled a long-standing promise of free drinks should silver ever reach 50 cents an ounce or more. "Girls climbed on the tops of bars. They pulled their men after them. The town would have paraded, if there had been a town band. Joy reigned supreme" (Israel, 1963:95).

In Washington, Pittman described the proclamation as "the best Christmas present I have ever received. I am more than happy that it is also a Christmas present from the President to all the people of my State" (Israel, 1963:95).

Pittman died November 10, 1940, five days after his re-election to a sixth term in the Senate (Israel, 1963:173). Rumor still has it (and some old-timers in Tonopah say it's true) that Senator Pittman actually died in the Mizpah Hotel two days before the election and his body was placed in a tub in his room and packed with ice until the election was over and his victory assured. Then his death was announced (Anonymous, 1988).

Pittman was elected and re-elected because of his stands on local issues and his ability to satisfy the narrow demands of his constituents on silver, reclamation, and irrigation. He believed that silver should be the metallic base for currency and for coinage. He is said to have been a master at "manipulating amendments, riders, and conference committee compromises" to satisfy his Nevada constituents (Israel, 1963:2). He has been criticized for not representing the interests of the nation as a whole; instead, he safeguarded the interests of 110,000 Nevadans (Israel, 1963:2). Several months following his death, his wife attempted to

summarize his career. After many erasures and much crossing out, she wrote simply: "He loved our State and its people" (Israel, 1963:4).

Pittman attended to the needs of many in the state who were not wealthy or powerful—testimony not only to his caring but also to the egalitarian and close relationship that often existed in sparsely populated western states between politicians and the people they served. For example, in the early 1920s, Miruna Banovich and her five children were stranded on Ellis Island. They had returned to Montenegro after the death of her husband, Mike Banovich, but yearned for the freedom of the United States and, particularly, of Nevada. Using all her remaining money, Mrs. Banovich had returned to the United States; but the family was refused admittance because Mrs. Banovich was not a citizen and she had no papers for the children, all of whom were born in Tonopah. After many days of confinement on Ellis Island and facing deportation back to Europe, Mrs. Banovich told a concerned guard that Senator Key Pittman had often dined at Mrs. Banovich's Tonopah boarding house. The oldest daughter wrote a letter to Pittman in Washington, which the guard smuggled out and sent to the senator. Thanks to Senator Pittman's immediate intervention, the Banovich family was quickly on its way back to Tonopah (Banovich Lydon, 1987).

Vail Pittman

Vail Pittman was born in Vicksburg, Mississippi, September 17, 1883, the youngest of the four sons of William Buckner Pittman and Katherine Key Pittman. Like his brother Key, Vail had a political career in Nevada (Myles, 1972:111).

Brothers Key and William preceded Vail to Tonopah. In the summer of 1903 William Pittman returned to the southeast to promote Tonopah mining stocks, and in the fall, Vail returned with him to Tonopah (Moody, 1974:2). Vail's first words upon reaching Tonopah after a thirteen-hour stage ride from Sodaville were, "This is a hell of a country you've brought me to. When does the next stagecoach leave?" (Moody, 1974:2-3). Vail stayed in Tonopah about a month and a half, then returned to the south to close out his affairs.

More than a year later he returned from Louisiana, and Key found him a job working for the Tonopah-Goldfield Lumber and Coal Company, supervising the loading of lumber wagons that traveled between the two towns (Moody, 1974:3). Vail was soon placed in charge of the Goldfield office and in a few months bought the company's fuel division, naming it the Pittman Coal Company. By 1905 all four Pittman brothers were living in Tonopah. Key and William became law partners; Key was the best-known lawyer in the district, and William served a term as Nye County district attorney. In 1907 Vail sold his business and became undersheriff for two years, working for sheriffs Jack Owens and Dan Robb (Moody, 1974:3; Myles, 1972:113).

In 1911 Key leased a placer gold operation from the Round Mountain Mining Company and Vail joined him. The brothers did well at the lease, but when the company refused to renew it, Vail went to work for the White Caps Mining Company at Manhattan and then returned to Tonopah, where he was employed by the First National Bank (Moody, 1974:3- 4). In 1913 Vail became business manager of the Tonopah Miner, a mining publication with a national circulation. He used the newspaper to campaign for brother Key.

When Vail was unable to purchase an interest in the Miner, he purchased printing equipment and created the Ely Daily Times in 1920. Vail was active in White Pine County politics

and affairs, and in 1924, at the age of forty-one, he ran for the Nevada State Senate from White Pine County. He was elected, but declined to run for re-election in 1928 because Key was also on the ballot for re-election to the U.S. Senate (Moody, 1974:10-12).

Vail served as lieutenant governor of Nevada from 1943 to 1945. He became acting governor when Senator James Scrugham died and Governor E. T. Carville resigned to be appointed to the senatorial post. Pittman was elected governor in 1946 and served until 1950 (Myles, 1972:113). (When Key Pittman died in 1940 following his re-election to the U.S. Senate, Vail applied for the position, but Berkeley Bunker was appointed instead [Moody, 1974:21].) Vail was defeated in his re-election bid for governor in 1950 by Charles Russell (Moody, 1974:90). In another try for the governorship, Pittman was once again defeated by Russell in 1954 (Moody, 1974:109). He died January 29, 1964 (Moody, 1974:120).

Pittman is remembered for his formal bearing, immaculate and meticulous dress, courteous manner, and his gentleness and soft Southern accent (Moody, 1974:123). Although not remembered as an outstanding governor, he was, as one friend put it, a "good enough governor for the time" (Moody, 1974:124). He was the last of the "old Nevada" governors, presiding over a state whose economy was primarily dependent upon mining and agriculture as opposed to gambling and tourism (Moody, 1974:124).

Pat McCarran

Patrick A. McCarran was born in Reno on August 8, 1876, the son of Irish immigrant parents. When he was two years old, his family moved to a sheep ranch on the Truckee River a few miles east of Reno. He graduated as valedictorian from Reno High School in 1897 in a class of sixteen. McCarran entered the University of Nevada, where he was an indifferent student; he was forced to drop out during his senior year after his father suffered an injury. In 1902 he ran successfully for the Nevada State Assembly, representing Washoe County, on the Silver-Democratic ticket (Edwards, 1982:1–5). He advocated an eight-hour working day to apply to the mines, mills, and smelters of the state and to be extended to "other classes of labor so far as it can be made to apply" (Edwards, 1982:5). While in the legislature he gained recognition for his oratorical skills and energy. He lost a bid for a second term in the assembly in 1904 (Edwards, 1982:7).

In 1903 he married Martha Harriet Weeks from Elko County, whom he had met while attending the University of Nevada. Following his defeat for re-election, McCarran passed the state bar examination and decided to move to Tonopah, the political center of gravity of the state at that time. Unlike Key Pittman, who specialized in mining law, McCarran emphasized criminal law. In 1906 he ran unopposed as a Democrat for the post of Nye County district attorney, but he only served one term, preferring the role of defense rather than that of prosecutor. McCarran also found it difficult to work closely with Democratic party leaders (Edwards, 1982:6-8).

At this time he incurred the enmity of George Wingfield, who had become rich through his Goldfield and Tonopah investments and who was to become, for twenty-five years, the power behind the scenes in Nevada politics. McCarran represented George Wingfield's wife, May, in a seamy divorce case. She charged her husband with extreme cruelty, "forcing her to having marital relations with him when he had syphilis" (Edwards, 1982:10). Deep disagreements also stemmed from Wingfield's leadership role in urging Nevada Governor John Sparks to request federal troops during the Goldfield labor troubles in 1907-1908, a move that McCarran opposed. Because of his stand on the troops issue, McCarran began to acquire a reputation as a "dangerous radical." His relationship with Wingfield and his inability to work effectively with state Democratic party leaders were to block his deeply felt political ambitions for more than two decades. Upon completion of his term as Nye County district attorney, McCarran and his family moved back to Reno (Edwards, 1982:10-13).

In northern Nevada, McCarran acquired a reputation as one of Nevada's most able criminal attorneys. Even if he had a weak case, he could overwhelm a jury with his oratory and theatrics (Edwards, 1982:14). He served on the Nevada Supreme Court from 1913 to 1918 (Edwards, 1982:17).

After making several unsuccessful bids for high political office, McCarran was finally elected to the U.S. Senate in 1932, barely defeating Republican Tasker Oddie in that year's Democratic landslide (Edwards, 1982:47). In the Senate he was chosen for positions on the powerful Judiciary and Appropriations committees (Edwards, 1982:56-57). He frequently found himself in disagreement with Roosevelt's program. Eventually he became known for his anticommunist stands and became an ally of Senator Joseph McCarthy. He sponsored the McCarran-Walter Immigration Act of 1952, which biased immigration to the United States toward countries from northern and western Europe (Edwards, 1982:147). Public disputes with Las Vegas Sun editor Hank Greenspun in the early 1950s (Edwards, 1982:155-157) weakened McCarran's power. He died in 1954, two-thirds of the way through his fourth term. Senator Richard Russell of Georgia said of him,

Needless to say, he was an able and effective legislator. I doubt whether any man who ever served in this body sponsored the passage of more legislation, in wider and more varied fields, than did this great senator from the State of Nevada.... No greater tribute can be paid to any member of the Senate than to say he stood for something. Senator McCarran stood for the things in which he believed, and stood there fearlessly (Edwards, 1982:199).

The Washington Post wrote: "He often used his power shortsightedly and for narrow ends. But no one, even while disagreeing with him, could challenge his sincerity of purpose" (Edwards, 1982:199). A recent biographer emphasized that McCarran achieved much in material rewards for the state of Nevada but contributed little to the improvement of the state's government (Edwards, 1982:200).

George Wingfield

George Wingfield was born in Fort Smith, Arkansas, August 16, 1876 (Thornton, 1967:1). In 1896 he joined a cattle drive heading through Nevada and ended up in the Winnemucca-Golconda area, where he acquired interests in gambling houses (Thornton, 1967:2-3). His rise to power began in the Winnemucca area and was quite rapid. The following account of his meeting with Winnemucca banker George Nixon is undoubtedly apocryphal, but it is widely quoted and Wingfield never repudiated this version of his rise to prominence, probably believing that it served his image as a Horatio Alger of the West (Raymond, 1989).

As told by one-time Tonopah resident Mrs. Hugh Brown (1968), Wingfield was an itinerant cowboy wearing blue jeans and a broad Stetson hat when he stepped up to the window of a bank in Winnemucca and spoke to George Nixon, a middle-aged banker. Wingfield showed Nixon a solitaire diamond ring and asked, "How much will you let me have on this stone?"

Nixon examined the stone and answered, "Well, it looks like a nice stone, but I'll have to have it appraised before I can tell you what the bank will lend on it."

"Listen," Wingfield said, "I'm not asking the bank, I'm asking you. I want you to lend me the money on face value. How about \$250?"

When asked what he needed the money for, Wingfield explained that he had come from Oregon and had been punching cows in the Winnemucca area. "There's a strike down at Tonopah. The place is booming, and I want to get in on it. You and I will go 50-50 on everything."

Nixon thought for a moment, carefully looked at Wingfield, then handed him \$250. Wingfield went to Tonopah and soon became a partner in the gaming concession in Tom Kendall and Jack Carey's Tonopah Club. All the good mining claims had long since been staked out in Tonopah, but there was a great deal of prospecting in the surrounding areas and Wingfield started to grubstake prospectors. He staked a half-Indian named Harry Stimler who was searching the desert for silver. About 30 miles south of Tonopah, at a place called Rabbit Springs, Stimler found a piece of promising float and traced it to its ledge. He staked out several claims in December 1902. Stimler's find touched off frantic activity in the Rabbit Springs area, and his discovery and others led to the establishment of the boomtown of Goldfield, which for a time became Nevada's largest community. Wingfield purchased Stimler's claim, the Sandstorm (named in honor of the weather the day Stimler found it). The Sandstorm produced \$7 million in seven months (Brown, 1968:61-62; Thornton, 1967:2-4). Wingfield kept his word to Nixon and they went on to establish banks in Tonopah and Goldfield and to consolidate a large number of mining claims and leases in the area into the Goldfield Consolidated Mines Company (Thornton, 1967:4-7). Nixon be-came a U.S. senator from Nevada, but Wingfield lacked ambition for political office, preferring to remain behind the scenes.

The truth of this tale is that Wingfield had money when at Winnemucca-Golconda, and that Nixon, who was an older man, used Wingfield as his agent. Wingfield followed Nixon's orders, and the two were involved in investments (Raymond, 1989). Moreover, Wingfield never staked Stimler, and though he did grubstake prospectors and had one or two good mines, Wingfield and Nixon purchased most of their many properties in Goldfield (W. Metscher, 1989; Shamberger, 1982). Wingfield did go on to amass a tremendous fortune; for a generation he was the most powerful man in Nevada.

By 1932 Wingfield owned 13 of Nevada's 32 banks; these banks controlled 57 percent of all bank deposits and almost 60 percent of all assets and bank liabilities in the state (Edwards, 1982:27). Because of his financial power, Wingfield was able to control a bipartisan political machine in the state that included Republicans Tasker Oddie (governor, 1911-1914, senator, 1921- 1933), Lester Summerfield, Fred Balzar (governor, 1927-1934), and Morley Griswold (lieutenant governor, 1927-1934, governor, 1934); and Democrats Key Pittman (senator, 1913-1940), William Woodburn, George Thatcher, Sam Pickett, Ray Baker, George A. Bartlett, and James Scrugham (governor, 1923–1936) (Edwards, 1982:28). Nevada has been described as

having had "a clubby type of government," with political leaders getting their start in Tonopah and Goldfield and later Reno (Edwards, 1982:34). The Depression eventually caused a collapse of Wingfield's banking empire and his twenty-five-year domination of state politics came to an end (Edwards, 1982:49). He died in 1959 at the age of 83 (Thornton, 1967:62).

CHAPTER 13 For the Record: The Central Nevada Museum

Residents of central Nevada have long been aware that the area has a unique and interesting history, well worth preserving for future generations. During the 1950s a group of concerned citizens formed an organization dedicated to the preservation and dissemination of local history. Memoirs of some oldtimers were tape-recorded, and items of historical interest were donated for display in a small museum, housed first in the old Elks Hall, then on Main Street where the Central Market had once been. Receiving no pay and working out of sheer love for the subject and the pleasure he got from talking to others, Pete Peterson, a retired miner who had been in the area for many years, was the unofficial curator for the local historical society. Pete was married to Leona Trickey, who had many trophies from her days as a bareback rider, roper, and sharpshooter in several wild west shows. Peterson operated the museum during the late 1950s and early 1960s. He kept a log that guests signed when they visited the museum. Among the visitors were many young Tonopah residents who were in grade school or high school at the time. They frequented the museum, growing up with the idea that history was important and worth preserving. When Peterson was no longer able to care for the museum, it closed and its display cases and artifacts were placed in storage (W. Metscher, 1987).

At about the same time, and for several years after the museum closed, Andy Anderson served as an unofficial historian for the town. Anderson, a short man with a great white beard, always wore red shirts and suspenders. He was an employee of the Mizpah Hotel and functioned as a town greeter for tourists; he passed out "Lucky Bucks," certificates good for redemption at the Mizpah. He had a fair knowledge of Tonopah history and would talk the ears off the tourists on the subject, given the chance (W. Metscher, 1987).

In 1978, many years after Peterson's museum had closed, a number of the remaining old-timers, many people who remembered the museum from their childhood as well as other leading figures in the community, organized the Central Nevada Historical Society. One of their goals was to establish another museum in Tonopah. Bylaws were created, a dues system was placed in effect, and the organization held its first and only membership drive by sending out a mailing from a list of subscribers to the Tonopah Times. The organization obtained about 400 members from this mailing; membership remains at about 450 to 500. The society began a publication entitled Central Nevada's Glorious Past that is published twice a year and features pictures and stories about the area. The group began to collect artifacts and place them in storage (W. Metscher, 1987).

At the same time, the group began seeking sources of funding for the construction of a museum. Many applications were submitted, including one to the Fleischmann Foundation, a Nevada-based organization, which was going out of business and disbursing its funds. The foundation awarded the Central Nevada Historical Society, through Nye County, \$215,000 for the construction of a museum. The Bureau of Land Management leased a building site to Nye County for a fee of \$1. The site is located between the hospital and the power company off Main Street on the east side of Logan Field Road. An architect drew up plans and construction began in January 1980; the grand opening was held in July 1981 (W. Metscher, 1987).

The museum is operated by the Central Nevada Museum Advisory Board and is answerable to the Nye County com-missioners. The seven board members come from throughout Nye County, including members from Tonopah, Beatty, Pahrump, Gabbs, and Manhattan. Members of the board are appointed by the Nye County commissioners and there has been little turnover. The physical assets of the museum are under three-way control, with the county legally owning the building, the Bureau of Land Management owning the land, and the historical society maintaining ownership and control over the artifacts and items displayed in the museum. The society also owns a mine tunnel on Butler Mountain, which has been cleaned up and made secure with vault doors from the old Tonopah and Goldfield Railroad Depot in Tonopah and is used to store artifacts (W. Metscher, 1987).

Throughout the formation of the Central Nevada Historical Society and the development of the museum, the Metscher brothers—William, Philip and Allen—have been the driving force behind the group's activity. They have donated countless hours of their time without pay toward the recording and preservation of local history. Three equally important goals now lie behind the operation of the society and museum: preservation of historically important items; display of as many of those items as possible in the museum; and maintenance of a research facility and reference library. The museum serves an important role in central Nevada by informing area residents and tourists of the region's history. In addition, it is important as a tourist attraction and is therefore an economic asset to the community.

Epilogue

The era of the underground miner is almost ended. This type of mining involves skills that few know and for which there is almost no demand. As the world turns more and more to highly mechanized open-pit mines and to plastic and ceramic replacements for metals, there is no reason to think that demand will be revived. The era of the small-time mining leaser has also vanished. To be a leaser one had to be a dreamer, a wishful thinker—one whose expectations, perhaps, had become confused with hopes. In Tonopah the leasers started the camp and they closed it. Many made good money, but most made only wages, if that.

The glory days of Tonopah were sandwiched between the two eras of leasing. The town boomed. But companies dominated by wealthy Eastern capitalists controlled the mining. They were in mining for the money and generally cared neither for the town nor the miners. They took what they could and then left, pirating away the wealth that the hills once concealed, leaving the town to survive on its own.

Because of its location midway between Las Vegas and Reno, Tonopah, unlike so many mining camps in central Nevada, probably would never have completely vanished from the map. But it surely would have shrunk, becoming a strip community of gas stations and motels. World War II brought the air base; an influx of other defense-related money soon followed. During the 1980s, the boom in open-pit mining, including Anaconda, Round Mountain, and Candelaria, provided further stimulation for the Queen of the Silver Camps, once called "the greatest, the richest and the best mining camp in the world." Who can say what the future holds? If it is half as interesting as the past it will surely be something to see!

References

Angel, Myron F., ed. History of Nevada with Illustrations and Biographical Sketches of its Prominent Men and Pioneers. Oakland, CA: Thompson and West. 1881. Reprinted by Howell-North, Berkeley, CA. Introduction by David F. Myrick. 1958. Anonymous. Personal communication. 1988.

Ball, S. H. Mines of Silver Peak Range, Kawich Range and Other Southern Nevada Districts. U.S. Geological Survey Bulletin No. 308. 1907. Republished by Nevada Publications, Las Vegas, NV. 1983.

Ballantyne, Kurt. "A Busy Air Field." Central Nevada's Glorious Past, Special Issue, No. 1, inside back cover. April 1987.

Banovich Lydon, Catherine. An Interview with Catherine Banovich Lydon. Tonopah, NV: Nye County Town History Project. 1987.

Berg, Lucille Rae. "A History of the Tonopah Area and Adjacent Region of Central Nevada, 1827-1941." Unpublished M.A. thesis, University of Nevada, Reno. May 1942.

"Big Casino 1922 Fire is Recalled." Tonopah Daily Times and Bonanza, October 23, 1942. Bradhurst, Stephen T. Personal communication. 1988.

Bradshaw, Albert N. An Interview with Albert N. Bradshaw. Tonopah, NV: Nye County Town History Project. 1987.

Brooks, Richard. Personal communication. 1988.

Brown, Mrs. Hugh. Lady in Boomtown: Miners and Manners on the Nevada Frontier. Palo Alto, CA: American West Publishing Company. 1968.

Buffum, Toni, and Allen Metscher. "Information on the Tonopah Red-Light Area During the 1930s." No. 19. On file at Central Nevada Museum, Tonopah. June 1982.

Burke, Thomas D., and C. Lynn Furnis. "Cultural Resource Inventory of the Smoky Valley Common Operation Expansion Project, Nye County, Nevada." Prepared for Round Mountain Gold Corporation, Round Mountain, NV, and ERT, Fort Collins, CO. June 29, 1987.

Campbell, Elizabeth W. C., and William H. Campbell. "A Folsom Complex in the Great Basin." Masterkey, Vol. 14, No. 1, pp. 7-11. 1940.

Carlson, Helen Swisher. Nevada Place Names: A Geographical Dictionary. Reno: University of Nevada Press. 1974.

Carpenter, Jay A. "Effect of the War upon Tonopah Mining." Engineering and Mining Journal, Vol. 106, No. 14, pp. 601-604. October 5, 1918.

"The History of Fifty Years of Mining at Tonopah, 1900-1950." In

"The History of Fifty Years of Mining at Tonopah, 1900-1950." Jay A. Carpenter, Russell Richard Elliott, and Byrd Fanita Wall Sawyer. University of Nevada Bulletin, pp. 43-153. January 1953.

Carpenter, Jay A., Russell Richard Elliott, and Byrd Fanita Wall Sawyer. "The History of Fifty Years of Mining at Tonopah, 1900-1950." University of Nevada Bulletin. January 1953.

Carter, Gregg Lee. "Social Demography of the Chinese in Nevada: 1870–1880." Nevada Historical Society Quarterly, Vol. 18, No. 2, pp. 73-89. Summer 1975.

Chan, Loren. Sagebrush Statesman: Tasker L. Oddie of Nevada. Reno: University of Nevada Press. 1973.

"The Chinese in Nevada: An Historical Survey, 1856-1970," Nevada

Historical Society Quarterly, Vol. 25, No. 4, pp. 266-307. Winter 1982.

Charney, Jean. Personal communication. 1988.

Cline, Gloria Griffen. Peter Skene Ogden and the Hudson's Bay Company. Norman: University of Oklahoma Press. 1974.

Cofone, Albin J. "Themes in the Italian Settlement in Nevada." Nevada Historical Society Quarterly, Vol. 25, No. 2, pp. 116-130. Summer 1982.

Colvin, Bobbie Lee. Personal communication. 1987. . Personal communication. 1989.

. An Interview with Norman Coombs. Tonopah, NV: Nye County Town History Project. 1990.

Coray, Michael S. "'Democracy' on the Frontier: A Case Study of Nevada Editorial Attitudes on the Issue of Nonwhite Equality." Nevada Historical Society Quarterly, Vol. 21, No. 3, pp. 189-204. Fall 1978.

David, LeRoy. Personal communication. 1989.

D'Azevedo, Warren L., ed. Great Basin. V ol. 11 of Handbook of North American Indians. Washington, DC: Smithsonian Institution. 1986. DeCorte, Ted Louis. "The 'Red Scare' in Nevada, 1919-1920." Unpublished M.A. thesis, University of Nevada, Las Vegas. 1979.

Directory cf the City of Goldfield, Diamondfield, Jumbo Town, Mill Town, Nevada. 1907-08. New York: National Directory Company. 1907.

"The Discovery and Development of Tonopah." Mining and Scientific Press, Vol. 90, p. 8. January 7, 1905.

Doughty, Nanelia S. "Lottie Nay—Tonopah Naught One: Bitter Winter Storm Lasted Two Weeks." I as Vegas Review-Journal, "Nevadan," pp. 3–5. June 2,1974.

"Minnie Thompson was 'Scamp' of the Camp." Las Vegas Review

Journal, "Nevadan," p. 6J-7J. July 12, 1981.

Dynan, John Lane. "Operating Conditions at Tonopah Extension Mine." Mining and Metallurgy, Vol. 170, pp. 26-28. February 1921.

Earl, Phillip I. "The Tonopah Ambulance Regiment." Nevada Historical Society Quarterly, Vol. 25, No. 4, pp. 327-339. Winter 1982. . "Ladies of Tonopah Put Their Hearts into Buying Ambulance for

Troops in Europe." Pahrump Valley Times. January 1, 1988.

Edwards, Jerome. Pat McCarran: Political Boss of Nevada. Reno: University of Nevada Press. 1982.

Egan, Ferol. Fremont, Explorer for a Restless Nation. Garden City, NY: Doubleday. 1977. Reprinted by University of Nevada Press, Reno. 1985.'

Elliott, Russell Richard. "Extracts from 'The Tonopah, Goldfield, Bullfrog Mining Districts 1900-1915; A History of a Twentieth Century Mining Boom." In "The History of Fifty Years of Mining at Tonopah, 1900-1950." Jay A. Carpenter, Russell Richard Elliott, and Byrd Fanita Wall Sawyer. University of Nevada Bulletin, pp. 19-42. January 1953.

. Nevada's Twentieth Century Mining Boom: Tonopah, Goldfield, Ely. Reno: University of Nevada Press. 1966. . History of Nevada. Lincoln: University of Nebraska Press. 1984.

Ellis, Anne. The Life of an Ordinary Woman. Boston: Houghton Mifflin. 1929. Cited in "The Tonopah Ladies" by Ann Ronald, Nevada Historical Society Quarterly, Vol. 20, No. 2, pp. 93-100. Summer 1977.

Elston, Robert G. "Prehistory of the Western Area." In Great Basin, Warren L. D'Azevedo, ed. Handbook of North American Indians, Vol. 11, pp. 135–148. Washington, DC: Smithsonian Institution. 1986.

Fallini, Helen L. An Interview with Helen L Fallini. Tonopah, NV: Nye County Town History Project. 1987.

Finnegan, Inez. "Growing up on the Butterfield Springs Ranch in Railroad Valley, 1905-1925." Women, Children and Family Life in the Nevada Interior, 1900-1930s. Oral histories conducted by Elizabeth Patrick and edited by R. T. King. Pp. 18-63. University of Nevada, Reno. 1987.

Fletcher, Fred Nathaniel. Early Nevada: The Period of Exploration, 1776-1848. Reno: University of Nevada Press. 1980. (First published by A. Carlisle in 1929.)

Foster, Josephine Johnson. "Recollections of Life in Millers, 1920-1926." Women, Children and Family Life in the Nevada Interior, 1900-1930s. Oral histories conducted by Elizabeth Patrick and edited by R. T. King. Pp. 91–105. University of Nevada, Reno. 1987.

Funk, Ann W. "Peter Ogden: Nevada's First Great Explorer." Las Vegas Review-Journal, "Nevadan," pp. 6L-7L. May 30, 1982.

Gold, Herbert. "Tonopah." CalToday. August 29, 1982. On file at Central Nevada Museum, Tonopah. File No. 23.

Hammond, Lena. "Memories of Austin, Bodie and Goldfield, 1900-1910." Women, Children and Family Life in the Nevada Interior, 1900-1930s. Oral histories conducted by Elizabeth Patrick and edited by R. T. King. Pp. 1-17. University of Nevada, Reno. 1987.

Hanes, Richard C. "Cultural Persistence in Nevada: Current Native American Issues." Journal of California and Great Basin Anthropology, Vol. 4, No. 2, pp. 203-221. 1982.

"History of Tonopah Free Public Library." Tonopah Daily Bonanza. On file at Central Nevada Museum, Tonopah. File No. 51. n.d.

Hooper, Mayme W. An Interview with Mayme W. Hooper. Tonopah, NV: Nye County Town History Project. 1987.

"Housing Crisis." Central Nevada's Glorious Past, Special Issue No. 1, pp. 2–3. Central Nevada Historical Society, Tonopah. April 1987.

Hulse, James W. The Nevada Adventure: A History. Reno: University of Nevada Press. Fifth Edition. 1981.

Humphrey, Elsie. "Life on a Reese River Ranch, 1903-1915; Manhattan and Tonopah, 1920-1945." Women, Children and Family Life in the Nevada Interior, 1900-1930s. Oral histories conducted by Elizabeth Patrick and edited by R. T. King. Pp. 64-90. University of Nevada, Reno. 1987.

Israel, Fred L. Nevada's Key Pittman. Lincoln: University of Nebraska Press. 1963.

Keeler, P. E. "Nye County," in The History of Nevada, Samuel Post Davis, ed. Los Angeles: Elms Publishing Co., pp. 960-972. 1913.

Kosso, Lenore Marie. "Jugoslays in Nevada." Unpublished M.S. thesis, University of Nevada, Reno. 1974.. "Yugoslays in Nevada, part I." Nevada Historical Society Quarterly,

Vol. 28, No. 2, pp. 69-89. Summer 1985.

Kral, Victor E. "Mineral Resources of Nye County, Nevada," University of Nevada Bulletin, Vol. 45, No. 3. 1951.

Lakes, Arthur. "The Tonopah Volcanos." Mines and Minerals, pp. 554-555. July 1906.

Lewin, Roger. "The First Americans Are Getting Younger." Science, Vol. 238, pp. 1230-1232.

November 27, 1987a. . "Speaking in Many Tongues." Science, Vol. 238, p. 1232. November 27,1987b. "Skepticism Fades Over Pre-Clovis Man." Science, Vol. 244, p. 1140 June 9, 1989.

Lincoln, Francis Church. Mining Districts and Mineral Resources of Nevada. Reno: Nevada Newsletter Publishing Company.1923. Reissued by Nevada Publications, Las Vegas. 1982.

Lingenfelter, Richard E. Death Valley and the Amargosa: A Land of Illusion. Berkeley: University of California Press. 1986.

Lingenfelter, Richard E., and Karen Rix Gash. The Newspapers of Nevada: A History and Bibliography. Reno: University of Nevada Press. 1984.

McCracken, Robert D. History Reports and Literature Reviews: Nye County, Amargosa Valley, Beatty, and Pahrump, Nevada. SAIC, Vol. 11, pp. 1-116, Las Vegas, NV. December, 1986. . Personal recollection. 1988.

McCracken, Robert G. Personal communication. 1988.

Madsen, David B., and James F. O'Connell. Man and Environment in the Great Basin. Washington, DC: Society for American Archaeology. 1982.

Metscher, Allen. "Prostitution: A Good Life?" On file at the Central Nevada Museum, Tonopah. December 14, 1983.

Metscher, William J "Tonopah Mine Disaster." Central Nevada's Glorious Past, Vol. 2, No. 1, pp. 7-10. Central Nevada Historical Society, Tonopah. 1979.

. An Interview with William J. Metscher. Tonopah, NV: Nye County Town History Project. 1987.

. Personal communication. 1989.

Moody, Eric N. Southern Gentleman of Nevada Politics: Vail M. Pittman. Reno: University of Nevada Press. 1974.

Moore, Ruby K. An Interview with Ruby K. Moore. Tonopah, NV: Nye County Town History Project. 1988.

Morgan, Dale L. Jedediah Smith and the Opening of the West. Indianapolis: Bobbs-Merrill. 1953.

Mottaz, Stan. "County Evolution in Nevada." Nevada Historical Society Quarterly, Vol. 21, No. 1, pp. 25-49. Spring 1978.

Myles, Myrtle Tate. Nevada's Governors from Territorial Days to the Present, 1861-1971. Sparks, NV: Western Printing and Publishing Company. 1972.

Myrick, David F. Railroads of Nevada and Eastern California, Vols. 1 and 2. Berkeley, CA: Howell-North Books. Vol. 1, 1962; Vol. 2, 1963.

Nay, Lottie J. E. "Experiences of One of the First Ladies of Tonopah." Central Nevada's Glorious Past, Vol. 6, No. 2, pp. 19-22. November 1983.

Nevada Works Projects Administration, Division of Professional and Service Projects. Inventory of the County Archives of Nevada, No.12, Nye County (Tonopah). Pp. 4-23. 1940.

Ninnis, Lillian. "The Story of Victor Lambertucci," a series of articles appearing in the Tonopah Times-Bonanza and Goldfield News. On file at Central Nevada Museum, Tonopah. File No. 36. n.d.

Noren, Evelyn. "John Fremont Dared What Others Dreamed." Las Vegas Review- Journal, "Nevadan," pp. 6L-7L. December 12, 1982.

O'Connell, James F., Kevin T. Jones, and Steven R. Simms. "Some Thoughts on Prehistoric Archaeology in the Great Basin." In Man and Environment in the Great Basin, David B. Madsen and James F. O'Connell, eds., pp. 227–271. Washington, DC: The Society for American Archaeology. 1982. Potts, Donald B. An Interview with Donald B. Potts. Tonopah, NV: Nye County Town History Project. 1987.

. Personal communication. 1989.

Potts, Jeanne. An Interview with Jeanne Potts. Tonopah, NV: Nye County Town History Project. 1987.

Pulvers Auto and Highway Map of California and Nevada. In Western History Department, Denver Public Library, Denver, CO. 1924.

Rafferty, Kevin, and Lynda Blair. Billy Goat Peak: An Investigation and Reinterpretation of Virgin Anasazi and Paiute Prehistory and Ethnohistory. Environmental Research Center, University of Nevada, Las Vegas. 1984.

Rand McNally Co. Map. In Western History Department, Denver Public Library, Denver, CO. 1888.

Ransome, F. L. Mines of Gold field, Bullfrog and Other Southern Nevada Districts, with notes on the Manhattan District by Garrey and Emmons. U.S. Geological Survey Bulletin 303. 1907. Republished by Nevada Publications, Las Vegas. 1983.'

Raymond, Elizabeth. Personal communication. 1989.

Reeder, Ray M. "The Mormon Trail: A History of the Salt Lake to Los Angeles Route to 1869." Unpublished Ph.D. dissertation, Brigham Young University, Provo, UT. 1966.

Revert, Arthur. An Interview with Arthur Revert. Tonopah, NV: Nye County Town History Project. 1987.

Revert, Robert A. An Interview with Robert A. Revert. Tonopah, NV: Nye County Town History Project. 1988.

Roberts, Elizabeth. "Memories of Tonopah, 1916-1970s." Women, Children and Family Life in the Nevada Interior, 1900-1930s. Oral histories conducted by Elizabeth Patrick and edited by R. T. King. Pp. 106-124. University of Nevada, Reno. 1987.

Rocha, Guy Louis. "Radical Labor Struggles in the Tonopah-Goldfield Mining District, 1901-1922." Nevada Historical Society Quarterly, Vol. 20, No. 1, pp. 3-45. Spring 1977.

Vegas Review-Journal, "Nevadan," pp. 3J-5J. April 29, 1979. . "Uncle Sam's Bawdy House-a 1913 Tonopah Attraction." Central Nevada's Glorious Past, Vol. 10, No. 2, pp. 19-22. November 1987.

Ronald, Ann. "The Tonopah Ladies." Nevada Historical Society Quarterly, Vol. 20, No. 2, pp. 93-100. Summer 1977.

Sawyer, Byrd Fanita Wall. "The Gold and Silver Rushes of Nevada, 1900–1910." Unpublished M.A. thesis, University of California, Berkeley. 1931.

. "Extracts from 'The Gold and Silver Rushes of Nevada-1900-

1910." In "The History of Fifty Years of Mining at Tonopah, 1900-1950." Jay A. Carpenter, Russell Richard Elliott, and Byrd Fanita Wall Sawyer. University of Nevada Bulletin, pp. 1-17. January 1953.

Shamberger, Hugh A. Goldfield. Carson City: Nevada Historical Press. 1982.

Shepperson, Wilbur. "Immigrant Themes in Nevada Newspapers." Nevada Historical Society Quarterly, Vol. 12, No. 2, pp. 5-46. Summer 1969.

"The Immigrant in Nevada's Short Stories and Biographical Essays." Nevada Historical Society Quarterly, Vol. 12, No. 3, pp. 3-15. Fall 1970.

Skanovsky, Bruno, and Ann Skanovsky. An Interview with Bruno and Ann Skanovsky. Tonopah, NV: Nye County Town History Project. 1987.

Slavin, Edward R. An Interview with Edward R. Slavin. Tonopah, NV: Nye County Town History Project. 1987.

Personal communication. 1988. Personal communication. 1989.

Smith, Grant H. "The History of the Comstock Lode, 1850-1920." University of Nevada Bulletin, Vol. 37, No. 3. July 1, 1943. Ninth printing. 1980.

"Special Census of Nye County: Summary Report." College of Business and Economic Research. University of Nevada, Reno. 1985.

Steward, Julian H. Basin-Plateau Aboriginal Sociopolitical Groups. Washing-ton, DC: Smithsonian Institution, Bureau of American Ethnology, Bulletin 120. 1938. Reprinted in 1970.

"The Strike at Tonopah." Mining and Scientific Press, Vol. 123, pp. 281-282. August 27, 1921.

Swallow, Craig F. "The Ku Klux Klan in Nevada During the 1920s." Unpublished M.A. thesis, University of Nevada, Las Vegas. 1978.

Society Quarterly, Vol. 24, No. 3, pp. 202-220. Fall 1981.

Terrell, Solan. An Interview with Solan Terrell. Tonopah, NV: Nye County Town History Project. 1987.

. Personal communication. 1988.

Terrill, Ross. "Australia at 200." National Geographic, Vol. 173, No. 2, pp. 182- 211. February 1988.

Thomas, David Hurst. "How to Classify the Projectile Points from Monitor Valley, Nevada." Journal of California and Great Basin Anthropology, Vol. 3, No. 1, pp. 7-43. 1981.

. "An Overview of Central Great Basin Prehistory." In Man and Environment in the Great Basin, David B. Madsen and James F. O'Connell, eds., pp. 156-171. Washington, DC: The Society for American Archaeology. 1982a.

"The Colonization of Monitor Valley, Nevada." Nevada Historical Society Quarterly, Vol. 25, No. 1, pp. 2-27. Spring 1982b.

Thomas, David Hurst, Lorann S. A. Pendleton, and Stephen C. Cappannari. "Western Shoshone." In Great Basin, Warren L. D'Azevedo, ed. Handbook of North American Indians, Vol. 11, pp. 262-283. Washington, DC: Smithsonian Institution. 1986.

Thornton, Barbara C. "George Wingfield in Nevada: From 1896-1932." Unpublished M.A. thesis, University of Nevada, Reno. 1967.

Titus, A. Costandina. Bombs in the Backyard: Atomic Testing and American Politics. Reno: University of Nevada Press. 1986.

Toll, David. "After 75 years, Tonopah's Mizpah Is Commercial Hotel It Was Built to Be." Reno Gazette-Journal. On file at Central Nevada Museum, Tonopah. File No. 31. n.d.

"Tonopah Army Air Force Expansion October-December, 1943." Central Nevada's Glorious Past, Special Issue, No. 1, pp. 4-9. April 1987.

"Tonopah Extension Mill, Homes Razed by Fast-Spreading Blaze." Tonopah Daily Times and Bonanza. On file at Central Nevada Museum, Tonopah. File No. 27. October 23, 1942.

"Tonopah's Race War." On file at Central Nevada Museum, Tonopah. Book 2, No. 15. n.d.

"Triangular Timbering in Tonopah-Belmont Mine." Engineering and Mining Journal, Vol. 93, p. 931. May 11, 1912.

Tuohy, Donald R. "Some Early Lithic Sites in Western Nevada." Eastern New

Mexico University Contributions to Anthropology, Vol. 1, No. 4, pp. 27-38. Portales. 1968.

U.S. Department of Energy. Nevada Office. Personal communication. July 17, 1989.

Warren, Elizabeth von Till. "Armijo's Trace Revisited: A New Interpretation of the Impact of the Antonio Armijo Route of 1829-1830 on the Development of the Old Spanish Trail." Unpublished M.A. thesis, University of Nevada, Las Vegas. 1974.

Weide, David L. "Paleoecological Models in the Southern Great Basin: Methods and Measurements." In Man and Environment in the Great Basin, David B. Madsen and James F. O'Connell, eds., pp. 8-26. Washington, DC: The Society for American Archaeology. 1982.

Wilson, D. K. "Founding of Library in Tonopah Recalled." On file at Central Nevada Museum, Tonopah. n.d.

Young, Bertrand T. "Cultural Resources Inventory of a Proposed Fibre Optic Cable Trench Between Silver Spring and Tonopah, Lyon, Mineral, and Esmeralda Counties, Nevada." Archaeological Research Services. Submitted to Nevada Bell, Reno, NV. December 4, 1987.

Zanjani, Sally Springmeyer. "The Fire in the Tonopah Belmont Mine." Journal of the West, pp. 82-88. April 1981.

. Jack Longstreet: Last of the Desert Frontiersmen. Athens: Ohio University Press. 1988.

Zanjani, Sally Springmeyer, and Guy Louis Rocha. The Ignoble Conspiracy: Radicalism on Trial in Nevada. Reno: University of Nevada Press. 1986.

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