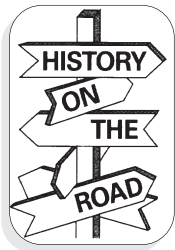


HISTORY ON THE ROAD

CHARCOAL AND NEVADA'S EARLY MINING INDUSTRY

By Thomas J. Straka and Robert H. Wynn



Scattered around Nevada are remnants of a charcoal industry that fueled the early smelters of Nevada. To make those smelters run in the late nineteenth century, vast areas of Nevada were deforested to provide the fuel,¹ a labor class of *carbonari* and woods workers developed,² and the Native American staple crop of pine nuts was devastated.³

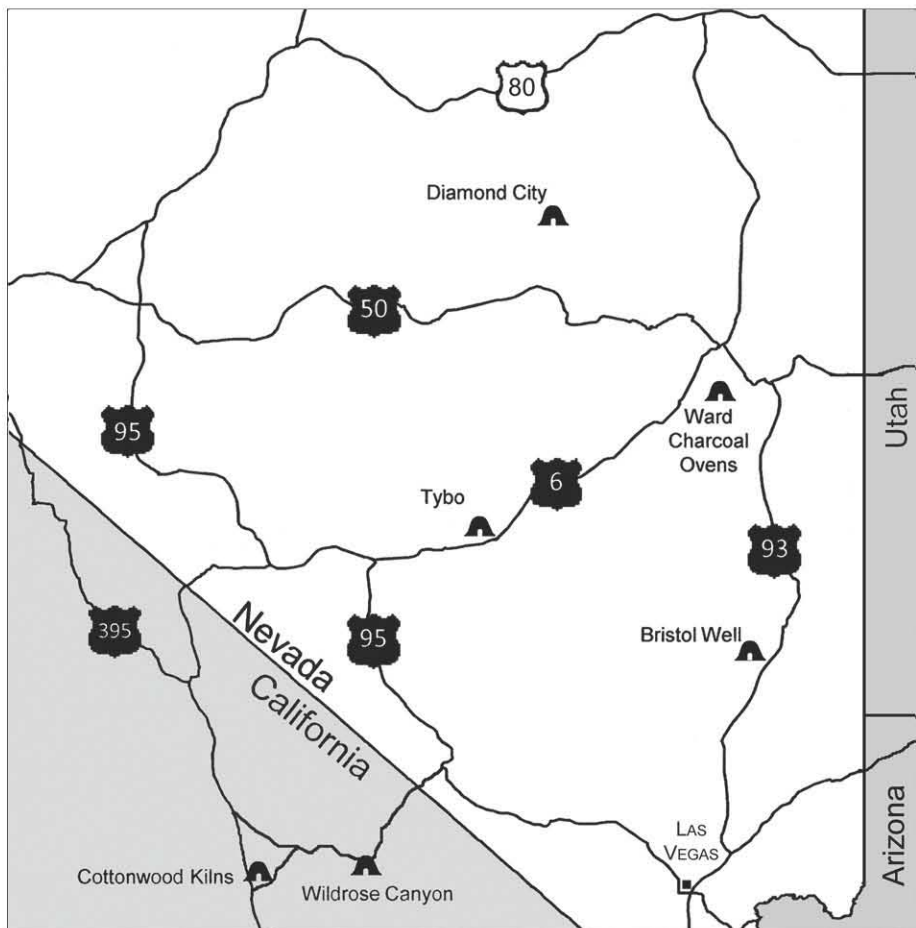
Nevada's mining era began in 1859 with the discovery of the Comstock Lode. (See "Comstock Lode" in *Forest History Today* (2007) for more on historic sites relating to the Comstock Lode—ed.) Within a few years the silver strikes moved into central Nevada. The Comstock ores were rich and required no smelting, but the central Nevada ores required smelting—and lots of wood, predominantly piñon pine and juniper, to make charcoal for the furnaces. It did not take long to deforest an area around a charcoal operation. For example, in Eureka, known as the Pittsburgh of

the West for its large operations, thirteen smelters were operating by 1873, just a couple of years after mining began in the area. Consuming more than 530 cords of piñon a day—which meant logging more than fifty acres a day—one year of major smelting activity led to clearcutting for ten miles around. By 1874, the devastation extended twenty miles. Four years later, with six smelting companies operating sixteen furnaces that consumed about sixteen thousand bushels of charcoal daily when operating at full capacity, there was no wood within fifty miles of Eureka.⁴



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The best example of charcoal kilns in Nevada is located at the Ward Charcoal Ovens State Historical Park.



The mining boom lasted from 1870 to 1885.

CHARCOAL PRODUCTION

Charcoal is made by partially burning (carbonizing) wood. Controlled combustion results from regulating the flow of air to the burning wood. Volatile gases from the wood are burned, leaving a carbon residue called charcoal. Charcoal burns twice as hot as wood and, because it is lighter than wood, was much more economical to transport to the smelters.

Most charcoal was made in earth “pits.” Actually, a charcoal pit is entirely above ground. Its base is a flat, cleared space about thirty to forty feet in diameter. Wood is stacked into a structure or wood pile that will support itself and leans inward to support a covering. It had a chimney and was covered with soil and leaves. A pit might contain a hundred cords (which would produce about three thousand bushels of charcoal) and take up to a month to burn through.

For better control of drafts and more efficient production, charcoal kilns, or

ovens, were constructed from brick or stone and often shaped like a beehive. Kilns held about thirty-five cords of wood. Billets were cut from nearby forests and hauled to the kiln site, then stacked in two tiers inside the oven. Openings around the base of the kiln and the vent at its top controlled the burning rate. The process would take about two weeks, and then the charcoal had to cool for up to a week. If the kiln was opened too soon or on a windy day, spontaneous fires could rapidly destroy the new charcoal.⁵

CHARCOAL WARS

Unique skills were needed to construct these kilns, and it fell to immigrant labor to build and operate them. Italian and Swiss-Italian immigrant *carbonari* (“charcoal burners”) cut the wood, constructed the kilns out of brick, carefully fired and tended them to produce charcoal, and then shipped the finished product to the smelters.⁶ Because of the long distances required to transport the wood for the kilns, charcoal was the most expensive component of the smelting process;

transporting charcoal required mule teams pulling multiple wagons loaded with four tons each. The cost of fuel for smelters led to contentious labor problems. These “charcoal wars” had both an economic and a racial basis and were both “hot” and “cold.”

The first hot war, the “Chinese War,” occurred at the mining town of Tybo in 1876. Mining booms had created a general labor shortage. One charcoal contractor decided to employ Chinese laborers to cut wood and fire the kilns. He paid them the going wage rate, which did not sit well with the Workingmen’s Protective Union. Two deputies were ordered from Belmont, the county seat, to Tybo. However, before the deputies arrived, a union delegation used the crack of bullwhips and pistol fire to persuade the Chinese to leave town.

The contractor hired armed men to escort the Chinese back to Tybo and protect his labor source. Back in Tybo, an indignation meeting took place, with one hundred fifty participants, and delivered an ultimatum that promised further action if the charcoal operations did not cease within twenty-four hours. The union resolved not to use force, but by this time the Chinese laborers were disgusted and decided to return to Eureka. The Anti-Asiatic League of Tybo passed a hat to raise money for a stage to transport them and the Chinese War was over.⁷

The Italian charcoal burners often spoke poor English and were easily cheated in charcoal transactions. In 1879, with the price of charcoal at twenty-eight cents per bushel and teamsters and middlemen often taking more than half that as their cut, five hundred *carbonari* met in Eureka at Tatti’s Saloon.⁸ The Eureka Coalburners Protective Association was formed and a strike was called to force the price of charcoal to thirty cents per bushel.⁹

The association threatened both strikebreakers and teamsters. When strife resulted in empty wagons’ reaching Eureka, Governor John Kinkead activated the Nevada militia to restore order and Italian workers soon filled the local jail, with overflow prisoners held at the militia armory. Violence erupted when a group of deputies confronted more than a hundred Italians south of Eureka, at Fish Creek. Five Italians were killed and many more wounded; one deputy was slightly hurt. The riot ended the “Charcoal



Like many of the kilns in Nevada, the Diamond City kilns are shaped like beehives.

Burners War” or “Nevada’s Italian War.” Once the strike ended, companies dropped the price of charcoal to twenty-six cents per bushel.

The charcoal industry’s “cold war” was one of attrition against the Shoshone in the area, and it cost the Native Americans the most of any group. The Shoshone helped provide lumber for industry and towns as well as food for the workers in what became a vicious cycle of destruction. As lumberjacks, they logged the very trees that provided pine nuts, a traditional winter food. Cowpunchers, as one historian has characterized it, “aided and abetted the eradication of the native grasses that provided their traditional summer fare of grass seed.” Destruction of food sources led to greater dependency on wages, which led to still greater destruction of food sources. By the time the mining industry collapsed in the 1880s, the piñon groves had gone, the grasslands were fenced, and the Shoshones’ old culture had largely vanished.¹⁰

CHARCOAL KILN ROAD TRIP

Charcoal kilns are still scattered around Nevada. Most are in remote areas, but a few are very close to paved roads. The directions below will help you reach the ones accessible with a regular two-wheel-drive vehicle (though for getting from one to another, you will need to work out an itinerary with good, detailed roadmaps). Be prepared for outdoor activity and driving in the desert.

The best example of charcoal kilns in Nevada is located at the Ward Charcoal Ovens State Historical Park. To get there, go 7 miles south of Ely via US 50/6/93, then 11 miles southwest on Cave Valley Road. These are some of the largest and best-maintained kilns in the state. There are six kilns in a row, about thirty feet high and thirty-one feet in diameter. Each one held about thirty-five cords, and the charcoal was used in the nearby smelters at Ward. The park has considerable background information on charcoal production.

The Hot Creek Range has one of the largest concentrations of remaining charcoal kilns in Nevada. Two of them are near Tybo, one of Nevada’s famous mining towns and a rare ghost town with significant buildings still standing. The location is about 50 miles east of Tonopah off of US 6. From Warm Springs (at the intersection of State Road 375 and US 6), take US 6 east for about 10 miles to the Tybo Historical Marker (right side of road); from there turn left at the marker onto the graded gravel road (Toiyabe Basecamp Road—there is no sign); after about 4 miles, bear left at the fork and it is about 9 more miles to Tybo. The two stone charcoal kilns are only a mile up the canyon from the end of Tybo. From the schoolhouse—the last building in Tybo—go 0.6 miles to a left fork, then—unless you have a four-wheel-drive vehicle—walk another 0.5 mile to the kilns. The two beehive-shaped kilns were constructed from native stone in 1872 and are about twenty-two feet high with about a twenty-nine-foot diameter outside at the base. There

is also a lime kiln at the site.

About 14 miles northwest of Pioche, one of the Old West's roughest and most notorious towns, is a sign for Bristol. Turn left there onto a well-maintained dirt road that leads west 7 miles to Bristol Well. After six miles on the dirt road, bear to the right at the intersection. Three charcoal kilns are still standing at the site. Only the kilns, two stone houses, a windmill, and a stone mill foundation remain, plus evidence that explains the use of the kilns: black smelter slag and large tree stumps in the hills nearby.

In Eureka, on US 50, buildings used for meetings during the Charcoal Burners War still exist, and one of the cemeteries behind the courthouse contains the graves of the five slain men. The Eureka Historical Society erected a monument there in 1983.

A few kilns remain in the Eureka area. One splendid example is the Phillipsburg Kiln, located near the old Phillipsburg mine and Diamond City, about 15 miles north of Eureka east of state route 278. Once you leave US 50 for NV 278, you will be traveling north through Diamond Valley. The valley is divided into east-west streets along township lines; they are a mile apart and consecutively numbered. Not all streets are maintained, meaning many are dirt roads without street signs. Turn right at 11th Street (one that does have a street sign) and proceed east for 7 miles until the street ends. Turn north for one mile and go until you intersect 12th Street and turn right to proceed east again for two miles. Locate the intersection of 12th and Mustang (there is a standard street sign in the middle of the desert). Facing east, the kiln is to your left at about where 12½ Street would be and about 1.5 miles to the east. It might be visible from there as the Bureau of Land Management has cleared around it and fenced it in. If you take Mustang Street south for about

0.5 miles, you connect to a major dirt road that parallels the foothills of the Diamond Mountain (Cottonwood Ranch Road on Google Maps, but there is no sign). Proceed north; just over a mile ahead are two roads (they intersect later) to the right that go up to the kiln. Ignore other roads to the right until you have gone the full mile. The kiln is on a short spur road to the right. The kiln is visible from the foothills if you look closely. Some of the roads closest to the kiln are sand-blown. Depending on conditions, you may want to walk the last mile or so. The site also contains the remains of a stone cabin, a wagon road, and the ramps used to load the wood into the kiln and unload charcoal.

The best charcoal kiln location for those in southern Nevada is just across the California line, in Death Valley National Park. One of the West's best-preserved examples of these kilns is in the park's Wildrose Canyon. They were constructed in 1877 for George Hearst's Modock Consolidated Mining Company. Remi Nadeau's Cerro Gordo Freighting Company hauled the charcoal to smelters by pack train and wagons. These kilns are about twenty-six feet tall and nearly thirty-two feet in diameter at the outside base.

A set of adobe charcoal kilns is just outside Death Valley. If you head west out of the valley, you will end up on US 395. Head north. South of Lone Pine is the dry bed of Owens Lake. Look for a state historical marker for the Cottonwood charcoal kilns, a mile to the east near the old lake shore. Across the lake were the Cerro Gordo mine and a smelter. Steamships crisscrossed the lake hauling timber and charcoal, and a V-flume brought timber and small blocks for the kilns down from the Sierra Nevada. The adobe has not held up well, but most of the kilns are still there. They are about twenty feet tall and have an outside diam-

eter of about twenty-two feet. The lake disappeared when the Los Angeles Aqueduct diverted water from Owens Lake, beginning in 1913. Before that, it covered some one hundred square miles and was more than thirty feet deep. □

Thomas J. Straka is a professor of forestry and natural resources at Clemson University in South Carolina. Robert H. Wynn is a well-known Nevada "ghost-towner" and photographer who maintains the "Ghost Town Seekers" website. All photographs are by Robert Wynn.

NOTES

1. Ronald M. Lanner, *The Piñon Pine: A Natural and Cultural History* (Reno: University of Nevada Press, 1981), 118–20, 124–25.
2. Thomas J. Straka, "Tom Straka on Chris Kreider's 'Ward Charcoal Ovens' and Nevada's Carbonari," *Environmental History* 11 (April 2006): 344–49.
3. Thomas J. Straka, "On Joe Pachak's 'Living Well Because of Mother'," *Journal of the West* 46 (Winter 2007): 3–6.
4. Lanner, *Piñon Pine*, 124–25.
5. James A. Young and Jerry D. Budy, "Historical Use of Nevada's Pinyon-Juniper Woodlands," *Journal of Forest History* 23 (July 1979): 112–21.
6. Straka, "'Ward Charcoal Ovens' and Nevada's Carbonari," 345.
7. Nell Murbarger, *Ghosts of the Glory Trail* (Las Vegas: Nevada Publications: 1956, repr., 1978), 135–140.
8. Tatti's Saloon is currently stop #5 on the Eureka Self-Guided Tour. A booklet is available at the museum in town.
9. Franklin Grazeola, "The Charcoal Burners War of 1879: A Study of the Italian Immigrant in Nevada" (MA Thesis, University of Nevada-Reno, 1969). The carbonari had a long history of organizing in Italy and fighting oppression.
10. Lanner, *Piñon Pine*, 129–30.

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