

# An Early Industry in Mills County: Ballast Burning

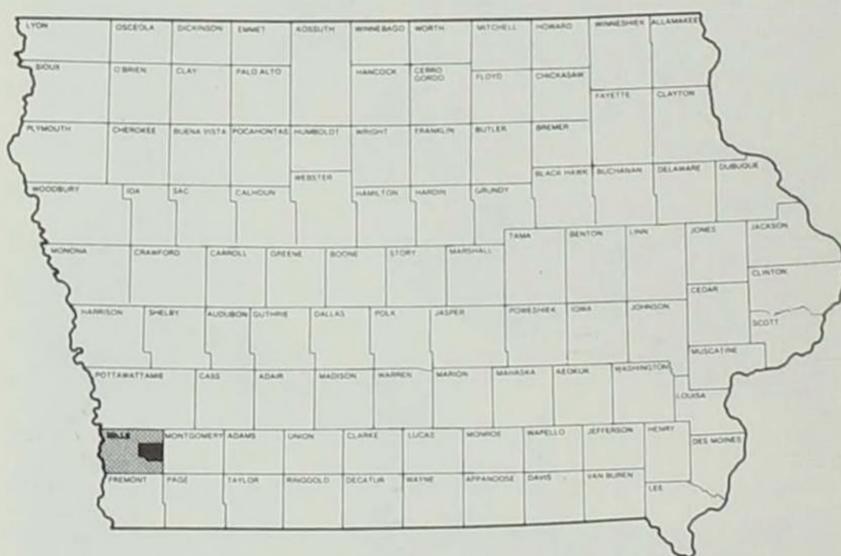
by Allen Wortman

Malvern was originally one of the "railroad towns" platted by a subsidiary of the Burlington and Missouri River Railroad, which completed its line across southern Iowa in 1869. As was true of many such communities, its growth was characterized by an energetic boosterism. The young men, many of them bachelors, who settled in railroad towns, hoped to win brides and amass fortunes as people flocked to their locales. They were ambitious individuals. They dreamed of developing flourishing cities that would attract not only the farmers of the surrounding area but, more importantly, would attract the capital for industries that would provide new employment, more in-migration, and additional wealth for ambitious young men. In his *Brief History of Malvern*, John D. Paddock caught the booster spirit of the early 1880s when he wrote: "The Board of Trade members have worn the hair off the top of their heads, butting in for new business and big things for Malvern."

The Burlington and Missouri River Railroad [B & MR], later to be the Chicago, Burlington, and Quincy [CB & Q], and, finally, the nation's largest railroad system, the Burlington Northern, came into existence well before the Civil War. A group of citizens in Burlington, Iowa, began the act of incorporation of the B & MR on January 15, 1852, but were unable to complete the organization of the railroad until November 22, 1853. Evidently, the surveying of the

route and the procuring of construction materials had proceeded during the interim for by March 22, 1854, the company had completed the first seventy-five miles of its road, from Burlington to Ottumwa.

As one of the railroads qualified to receive grants of public lands, the Burlington eventually obtained 390,072.23 acres of land in



*Indian Creek Township, Mills County, Iowa.*

Iowa, of which 40,613 acres were located in Mills County, its western terminus. The Civil War interrupted construction of the line, but at the end of the war work began anew. On November 18, 1869, construction crews working from both the west and east met near the Nishnabotna River between the new communities of Malvern and Hastings. There they laid the last rail and drove the last spike. Eight days later, on November 26, 1869, the first through passenger train, consisting of a mail and express car and three coaches loaded with pas-



*An early photograph of Malvern residents standing outside the printing office of the Malvern Leader, apparently just waiting for something to happen, c. 1870. (Allen Wortman Collection, SHSI)*

sengers, went over the new track. As described by John D. Paddock, who was also the town's first resident and merchant, the train "passed slowly through our little hamlet of one building without stopping. The entire population three in number were out and gave them the Chautauqua salute, which was returned in great number."

By the terms of the land grants the railroad company could not sell its land for less than \$2.50 per acre, which was twice the amount the government charged settlers who obtained land by direct patent from the United States Land Commissioner. But the new railroad's officials soon realized that more than \$2.50 per acre could be realized from the land it had

received. A town lot company had been formed which platted sites for towns along the new railroad; such towns were often only five miles or so apart. It was clear that town lots, in growing towns, would bring many times the \$2.50 per acre as the country filled with settlers. And since the completion of the line across the state meant low-cost passenger and freight services, there was a veritable explosion of new towns. In 1869, in Mills County alone, the towns of Emerson, Hastings, Hillsdale, Malvern, and Pacific Junction were all founded.

The citizens of the county seat, Glenwood, fearful that the new railroad might not run its tracks through their city, even called for an election to grant the B & MR tax advantages in Glenwood Township. That election, held on October 6, 1868, resulted in the approval of a proposal announced a year earlier by the Mills County Board of Supervisors:

*Resolved, That all the taxes now levied and standing against the clear list of lands in Mills county, Iowa, belonging to the Burlington and Missouri river railroad company, be and the same is hereby remitted, provided, that said company shall construct their road when extended west on the line of their road where it was definitely fixed and located by the board of directors in March, 1857.*

The settlement of the county by farmers had started even while the land was still considered part of the reservation of the Potawatomi Indians, who had been moved to western Iowa under the terms of a treaty signed in 1837. Less than a decade later, another treaty had been signed on June 5, 1846, which had given the Potawatomi a thirty-mile square tract in Kansas in addition to a money settlement. Thereupon the Potawatomi vacated western Iowa and headed into Kansas.

Shortly thereafter a number of Mormons had stopped off in the area of Mills County, clearing

land and planting crops which would be harvested later by others of the faith as the great Mormon trek to Utah got underway. Most of the Mormons had left the area for the West by 1853 and in the next few years sizable areas of Mills County land were taken up by more permanent settlers. With an insufficient transportation network to carry their crops and livestock to market and to bring in needed goods, however, these early settlers had to be virtually self-sufficient. Under such conditions it was economically important for them to encourage the building of railroads. Railroads meant better access to markets, an increase in the number of settlers in the area, and higher land values.

\* \* \*

The new towns which sprang up along the Burlington and Missouri River line did grow rapidly. By 1874, only five years after its three citizens had waved their handkerchiefs to passengers on the first through train, Malvern's population had grown to eight hundred. Other towns also flourished. As the countryside filled with farmers, merchants in the growing towns saw that the development of manufacturing plants or other industrial enterprises would make for an even more prosperous economy. Malvern's Board of Trade members were not atypical in their eager search for new businesses.

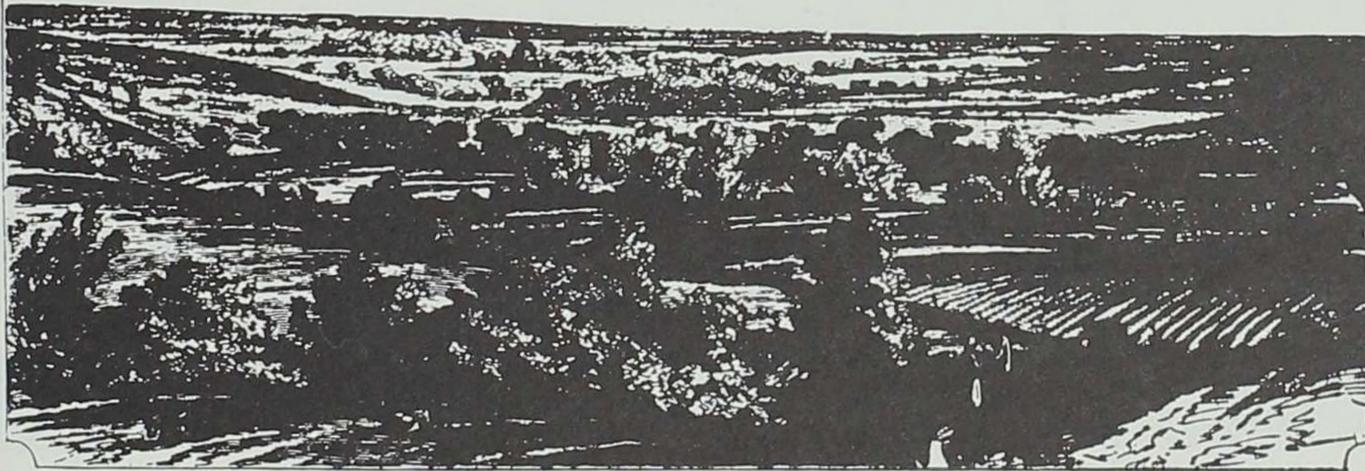
Inventions by clever tinkerers often provided the basis for new industries. Other times new businesses were based on new processes or innovations in procedures. The eastern promoters who devised the new enterprises and backed them were not always successful, and

*Opposite: An 1873 land advertising circular for the Burlington and Missouri River Railroad Company. "Through such enticing broadsides thousands of prospective settlers bought land at an average of \$12.17 per acre and opened up their farms along the right-of-way of the Burlington Railroad." (SHSI)*

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An 1884 view of the city of Malvern and its storefronts, taken from "just west of the mill." (Allen Wortman Collection, SHSI)

all of the new enterprises were not equally profitable. While merchants and boosters in the hinterland were always on the lookout for new industry, they were nevertheless wary of promoters. So it was when the Burlington and Missouri River Railroad [now the Chicago, Burlington, and Quincy] sought to establish a ballast burning project just north of the town of Hastings in the spring of 1884. Businessmen in the area envisioned a wave of economic prosperity, although no one seemed to know just what would be involved in such an operation.

When the railroads were first built, a low earthen roadbed was pushed up by the contractors using slips and horsepower. The ties were laid directly on existing soil. Construction engineers soon learned that if some rock or other ballast was put under the ties, the roadbed would be firmer and the grade thus stabilized. The ties, too, would have longer life and the rails would stand up better under heavy traffic. Coarse gravel was an ideal sort of ballast but there was little of that to be found in southern or southwestern Iowa. One engineer

discovered that certain types of soil could be fired into a brick-like material and then broken up into small pieces to make an excellent ballast. The Burlington not only had a lot of soil suitable for making ballast on or near its Iowa properties, it also had access to almost unlimited supplies of timber which could be used for fueling such ballast burning.

In early 1884 the Burlington announced that it would soon establish a ballast burning project near Hastings. The ballast would be used on branch line roadbeds in the area, particularly the line from Hastings north to Carson and a second line from Hastings south to Sidney.

By mid-February Hastings was in an uproar as strangers arrived and searched for housing or business rooms in anticipation of the men who would soon be at work on the project. The first public mention of the project appeared in the February 7, 1884, issue of the *Malvern Leader*: "The Q will send 150 men to Hastings next spring to burn ballast for improving the

branch roads here." Within two weeks of the project's announcement, vacant housing in the Hastings area was becoming scarce:

*Several parties were here on Saturday hunting houses in which to live. Some were successful but more were not. The cause of all this rush is the coming of all the railroad men who are going to make Hastings headquarters during the summer, while they are burning ballast for the road bed. Inquiries are made every day for business rooms and the prospect is that several new business houses will open up ere long.*

A short time later, the *Leader* reported that "[Squire Purcell] informed us that every vacant

house in [Hastings] had been rented for the men who were coming in a few days to burn ballast north of town about a mile." Squire Purcell had gone on to discuss the upcoming election on the saloon question. The question was whether Hastings residents would vote in favor of temperance, as the citizens of both Glenwood and Malvern had done. (Suffice it to say that with the prospect of 150 hardfisted, and probably hard-drinking ballast burners headed for Hastings, it was only good business to allow the whiskey element to win out at election time — which they did.) In late March the *Leader* reported that "H. E. Perry recently sold ten acres of ground to the contractor of the ballast work here for \$50 per acre." The high price paid Perry for his land excited land-owners throughout the area. Perry's land evi-



Chicago, Burlington, and Quincy railroad employees standing on a railroad bridge that crossed over a set of tracks near Malvern, c. 1870-1880. (Allen Wortman Collection, SHSI)

dently contained the type of soil needed for ballast burning. It was probably a heavy gumbo. The land also had plenty of mature trees for fuel supplies.

By early April 1884 the ballast workers were beginning to arrive in force. The contractor, William Davy and Company, ran the operation day and night, rain or shine, and the local newspaper noted that "The fires are never allowed to go out."

It was a complicated process to make ballast. Pits were dug laboriously by hand. They were then lined with firewood, which had also been chopped by hand. After the wood was fired, the soil was piled on the coals, more wood was added, and then more soil. In due time the soil changed into a red-brick aggregate which was later shoveled into railway cars and hauled wherever it was needed by the railroad. At first the work was all done by hand labor. Indeed, William Davy, the contractor, once complained to a Hastings resident that he found it difficult to find men for the project "who have acquired the knack of using a shovel to advantage." In the April 10, 1884, issue of the *Leader*, it was noted that "About fifty new men came in Saturday night and Sunday morning to work on the ballast making. The force now at work numbers over a hundred." There was a lot of turnover among workmen at the ballast pits, however.

Low-priced common labor tended to be rough, unpredictable, and generally troublesome for the contractor. In early May, Davy complained that "out of about 70 men secured in Chicago less than a month ago only four remain at work. The most of them were worthless to the extreme and soon received their walking papers." Yet he had no difficulty getting more men and two weeks later it was reported that fifty Italians had arrived to work on the project. Unfortunately, the Italians lasted only a week and a day. Something was said of its taking "three of them to do one man's

work."

Those who stayed were indeed a tough and hard-bitten crew. It didn't take long for the business elements in Hastings to realize that the wages of the ballast workers were spent mainly in the saloons. Moreover, drunkenness and fighting soon became a major part of life in and around Hastings. As the Hastings correspondent reported in the *Leader's* May 29, 1884, issue, "An even dozen drunks a day for the past week, with an occasional fight thrown in for seasoning. . . . The boys get filled up with too much 'personal liberty,' (sometimes known as beer) and then war begins." Rumors circulated among Mills County residents that a prizefight would be held on July 4th between two of the ballast burners. Most intriguing, however, was a December 4, 1884, news item from Hastings: "The east hill overlooking the quiet and peaceable town of Hastings was the scene of terrible bloodshed, hair-pulling and general disturbance on Saturday and Monday. Men and women engaged in a general knock-down. The boys have named it Bunker Hill."

The ballast burners were thus not much different from railway construction crews at any time or place in the nineteenth or early twentieth century. They were well within the wilder traditions of the British "navvies" or the riotous crews that built the great transcontinental rail lines in this country.

It was actually in the contractor's interest to attempt to isolate his workers from the more civilized areas nearby. Davy established a kind of temporary company town at the ballast works by putting up tents to serve as sleeping quarters and a mess hall, and, finally, by opening a general store at the works. The elimination of middlemen in providing services to the workers meant that wages could flow directly from the contractor to the workers and back again to the contractor in a most approved nineteenth-century capitalist fashion.

All did not go smoothly on the project, however. Accidents were common. Men were

occasionally thrown from handcars, the ballast train left the tracks at least once, a man was felled by sunstroke in mid-July, and the *Malvern Leader* of June 5, 1884, described a major (and unwanted) fire at the works:

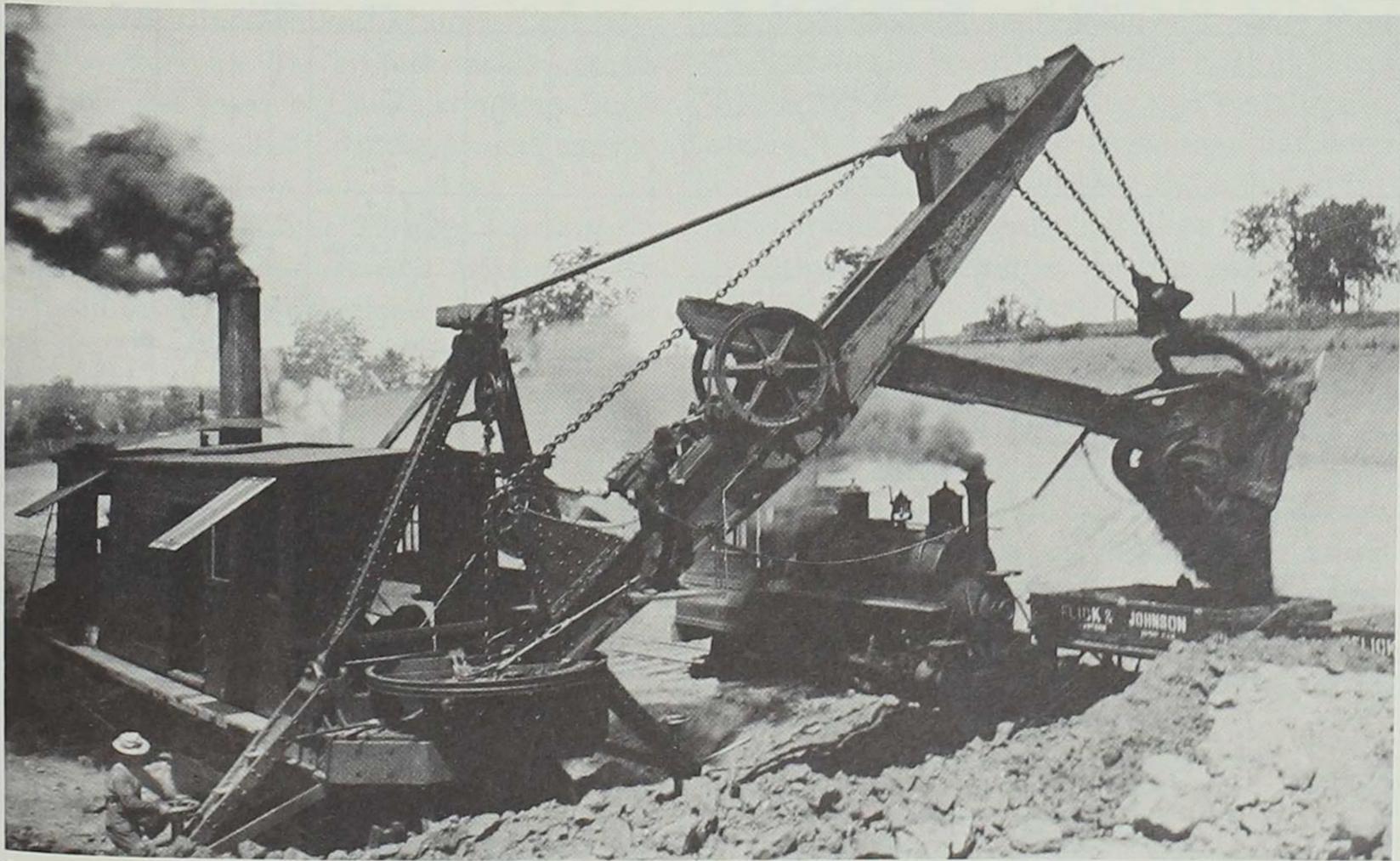
*The largest tent at the ballast works took fire and burned last Tuesday. It was used for sleeping purposes and there were about twenty beds destroyed together with a number of trunks, valises and the larger part of the clothes of the men. Quite a number of revolvers were hid away in trunks, valises and other places about the tent which when the fire reached them began to explode and for a few minutes the vicinity was very suggestive of a lively battle.*

At one point during the summer the workers

even went out on strike since Davy had gotten seriously in arrears in paying his workers' wages.

But ballast flowed steadily from the pits. With well over one hundred men working at the project, it was possible for one observer to write: "The ballast works, north of town look like a chain of burning volcanoes." A newsman reported: "A considerable amount of ballast has already been finished and the railroad company will commence loading it for use on their road bed this week." In late July the *Leader's* editor noted that the ballasters were headed toward Malvern from Hillsdale and their work had greatly improved the Q's roadbed.

With the ballast pits at full fire and a prosperous year in the offing for the farmers, the citizens of Hastings decided it would be a good time for a big Fourth of July celebration. Plans were started for the usual entertainment fea-



In 1903 the Chicago, Burlington, and Quincy railroad double-tracked the Red Oak, Iowa, line to improve the grade. The above photograph suggests ballast loading work similar to the work conducted in the Hastings area in 1884-1885. A large steam shovel loads dirt into railroad dump cars for transport to various points along the line. (Leonard A. Schwinn Collection, SHSI)

tures. Then there were rumors that more lively recreation might be available on the Fourth. The *Leader's* Hastings correspondent, quoting the *Council Bluffs Globe*, wrote:

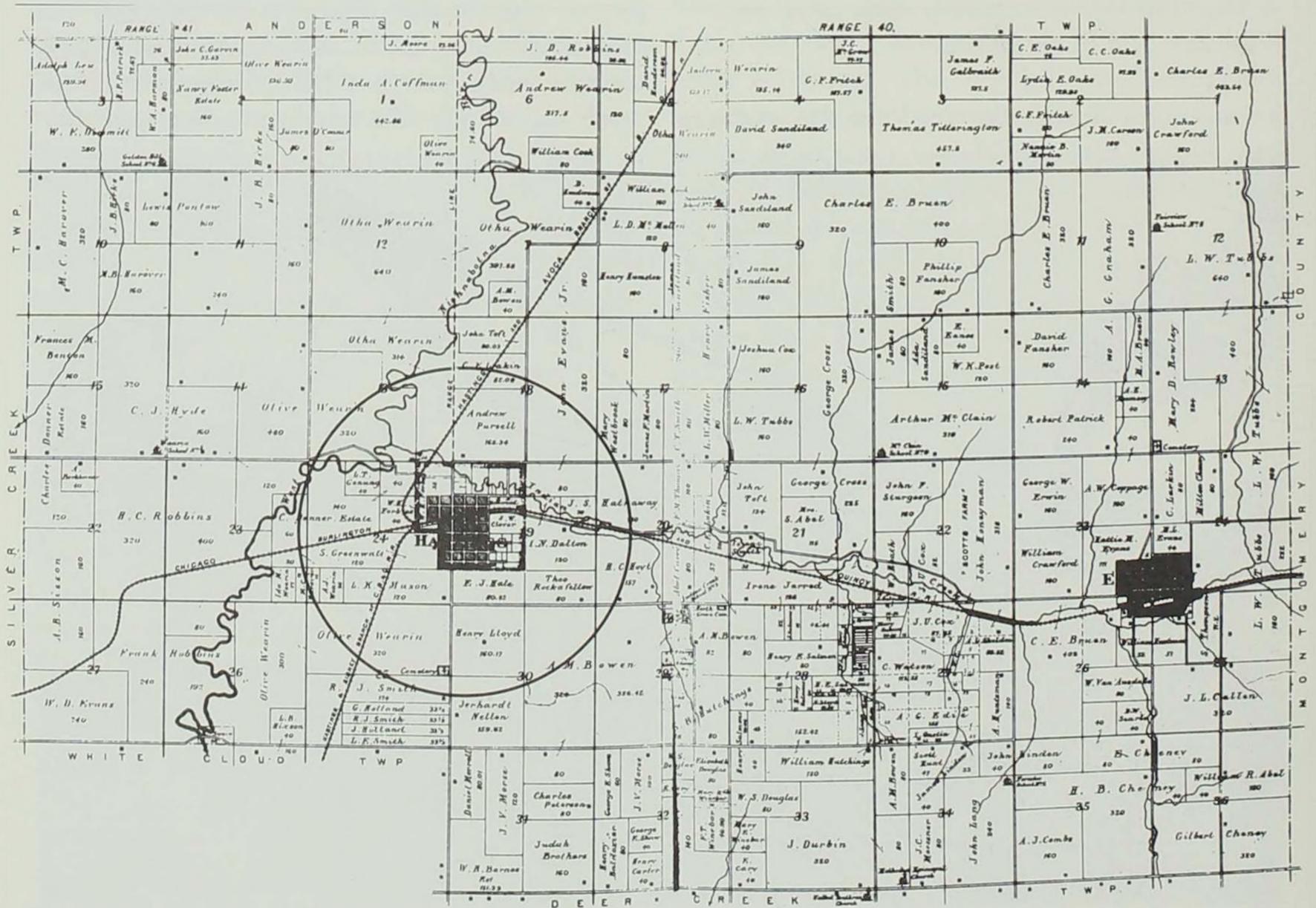
*It was given out sometime on Thursday, that two Englishmen engaged in the pits near Hastings, Mills county, in burning ballast for the C.B. & Q., intended having a prize fight yesterday, the Fourth. The Mills county officers were on the watch, and were extraordinarily vigilant.*

*Council Bluffs Globe's* account continued:

*Quite a number of sporting men from Council Bluffs were inveigled into the belief that such a fight was to come off, and went down on the train as far as Hastings and moved around in a mysterious way, and put on airs at the hotel, but when daylight came and the hour for the fight, the pitmen were all at work, laughing in their sleeves at the gullibility of the average American.*

Prizefighting was an illegal proposition in Iowa in 1884 and was definitely frowned upon. The

Nonetheless, the community's big celebration came off as planned. It was supported by farm-



Indian Creek Township, Mills County, Iowa, in 1891. A circle has been superimposed on the map around the general Hastings area as a point of reference for locating the ballast burning area described in the article. While it is not readily apparent where, exactly, the ballast pits were located, the map offers a valuable sense of the layout of Indian Creek Township a few years after the project ended.

ers and residents of neighboring towns and the railroad obligingly ran special trains to bring the celebrants to Hastings. The ballast pits didn't shut down for the holiday but no doubt many of the workers attended the celebration.

It can be seen that William Davy and Company let nothing interfere with the project's production. The ballast train moved ballast rapidly from the pits to various points along the line. For almost half a century afterwards the red ballast could still be seen under the ties and tracks of the Burlington in southwestern Iowa. On October 30, 1884, it was reported that William Davy and Company had completed their contract with the railroad. Two weeks later the *Leader's* Hastings correspondent reported that William Davy and Company had signed a second contract to burn an additional forty thousand yards of ballast for the Chicago, Burlington, and Quincy Company. New workers for the project arrived in the Hastings area even as Davy's company began work on a new ballast burning project near St. Joseph, Missouri.

In May 1885 ballast burning work in the Hastings area was in full swing. In one week in that month 306 cars were loaded out, "an average of 51 cars per day." Those cars carried probably only thirty tons of ballast each, but that was still an astounding level of production on a job that was done primarily by hand. It should be noted, however, that Davy had purchased a steam derrick and shovel during the previous year for the loading of ballast. News reports never gave the number of men actually employed on the project but it is unlikely that the total ever exceeded two hundred workers at any one time. Somehow William Davy had found a sufficient number of men who had "acquired the knack of using a shovel to advantage."

In late summer 1885 there were indications that the ballast project at Hastings

would soon be finished. "We are [informed] that the ballast works will close [at] this point soon," noted the *Leader's* Hastings correspondent while indicating that William Davy and Company had obtained similar contracts for a project at Dallas City, Iowa. In the August 20, 1885, issue of the *Leader* appeared the news: "The ballast train at this place is a thing of the past, having finished up their work and departed for Creston," but on September 10, there was talk of new contracts. Yet the new contracts apparently never materialized. Finally the ballast works were shut down in the Hastings area and the work force was transported to Dallas City.

A short time later Otha Wearin, one of the pioneer landowners in the Hastings vicinity, bought the land on which the ballast pits were located. His grandson, Otha D. Wearin, once recalled that for many years there were some deep pits there, usually filled with water from the frequent flooding of the Nishnabotna River. He remembered also that metal bolts, spikes, braces, and other equipment had been turned up by plows working the fields in the area. Even after the pits had silted full and had become less noticeable, the low places could still be seen in wet years.

As the railroads developed heavier freight cars and started to use longer and faster trains, the original tracks were replaced with heavier rails. Engineers discovered that the old red ballast deteriorated under the new conditions and it was gradually replaced with crushed limestone. Today only rarely can one find roadbeds containing the red ballast. □

#### Note on Sources

The *Malvern Leader* for the period from early 1884 to late 1885 served as the best source of information about the ballast burning industry in Mills County. Information about the incorporation of the Burlington and Missouri Railroad and its land grants, and the early history of Mills County was obtained from the *History of Mills County, Iowa*, published in 1881 by the State Historical Company of Des Moines. John D. Paddock's book, *A Brief History of Malvern* (Malvern: The Malvern Leader, 1917), was also valuable.