Needed, but not Wanted:
Immigrant Labor, the Sunrise Mine, and the North Platte Project

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Hard work is a language spoken on every continent by people otherwise voiceless. At the twentieth century's first light, Colorado Fuel & Iron (CF&I) brought many dialects of muscle power to the hills of eastern Wyoming. Immigrant labor freed the red ore CF&I desired, while in the nearby North Platte River valley, their brawn later raised a dam and dug a canal system for a federal water project. A group of immigrant laborers executed both ventures. In return, industry, middle-class Americans, and the federal government ridiculed the immigrants' customs and opinions.

When CF&I called for men to come to the Sunrise Mine in isolated Eureka Canyon, the rural poor of Greece and Italy answered. On arrival, they blasted, burrowed, and built for themselves a life based on hard work, sustained by the dreams they carried over in steerage. Two years after CF&I took control of the Sunrise Mine, it provided the West's largest steel producer with more than 75 percent of its iron ore. CF&I officials, masters of a region long ignored by both homesteaders and commerce, soon found themselves joined by another force intent on changing the physical and economic landscape. The United States Reclamation Service (USRS) arrived to conquer the region's other dominant landmark, the North Platte River. To achieve this goal, the government called upon the only pool of workers in the immediate vicinity—mine labor.[1]

The Sunrise property first produced high grade copper ore in the 1880s. Copper was only one of a variety of minerals beneath the geological formation known as the Hartville Uplift. A smelter sat on the banks of the North Platte, six miles from the mine. The copper deposit proved to be a pocket, and private firms searching for more only found iron ore. Despite the rapid depletion of copper, the October 5, 1895, *Engineering and Mining Journal* noted the canyon still held plentiful timber, good limestone, water power, railroad potential, and "a good smelting coal." By 1898, after hearing about the abandoned copper shafts bottomed in iron ore, Colorado Fuel & Iron of Pueblo took an interest in this corner of eastern Wyoming. CF&I secured control of the Sunrise Mine and 10,000 surrounding acres the following year.

A CF&I publication patronizingly referred to the Hartville uplift as the "little red hill" that was "once a paint shop" for the Sioux, Cheyennes, and Arapahoes. Those remarks belied the Sunrise Mine's true value to the firm. CF&I's Denver and Pueblo furnaces needed the red hematite ore for flux to produce steel railroad track. By 1902, three years after CF&I acquired the mine, Sunrise produced an average of 21,000 tons of ore a month, and company officials claimed the lack of ore cars prevented doubling that output. Mining on such a grand scale was only one of the changes the steel giant brought to Eureka Canyon. In four other Rocky Mountain states, CF&I turned mining camps into company towns. The acquisition of the Sunrise Mine meant the rough-and-tumble mining camps of Sunrise and Hartville were about to become civilized.[2]

The president of CF&I, Frank J. Hearne, viewed the company's homebase of Pueblo as "the hub of the universe of steel in the west and its diameter is a thousand miles." Sunrise and Hartville guarded the northernmost edge of CF&I's "solar system." Forty miles east of the Rocky Mountains, the two towns were nestled "among the hills that mark the winding course of the North Platte River." When CF&I ran a town, whether peopled by the "thrifty" citizens of Berwind-Tabasco, Colorado or isolated by the "vast wastes" surrounding the town of Fierro, New Mexico, the company practiced benevolent control. At Sunrise and Hartville, the corporation held lifelines to the outside world. Both towns' links -- the Colorado and Wyoming Railway Company, the Mountain Telegraphy Company, and the Colorado Supply Company -- were all owned

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and operated by CF&I.[3]

Founded in 1888, Sunrise, the older of the two towns, felt a mixture of gratitude and scorn toward CF&I. The streets of Sunrise still housed saloons and brothels at the time CF&I moved in. The town's leaders were glad for the work CF&I brought, but they secretly harbored the wish to break away, build their own smelter, and become another "Pittsburgh of the West." Skilled laborers like carpenters, ore car repairers, and bridge builders were among the first to come from across the country to live in the two towns. No one held such pretensions to respectability in the neighboring community of Hartville. As late as 1910, the editor of the *Hartville Uplift* proclaimed their collection of bunkhouses, saloons, and shacks "the most violent town in the state, as well as the most progressive."[4]

In 1900, the first full year of CF&I's operations in the Eureka Canyon, the Sunrise Mine paid $2 a day. Wages peaked at $2.25 a day in 1906, before dropping back down to $2 a day—an aftershock of the national financial depression of 1907-1908. Philip J. Mellinger's master's thesis on the region's camp life, "Early Hartville and Sunrise: A Study of the Frontier and Immigration in Wyoming," relates that common laborers found wages at Sunrise higher than earnings on jobs in other parts of the nation. A contemporary visitor to the mine saw the region's prosperity colored with the "dull red hue" of iron-ore dust that covered the company-built houses. That summer of 1900, on the Great Plains somewhere west of Chicago, Greek railroad gangs first heard of better opportunities in Wyoming. The Burlington Railroad paid the immigrants $1.35 a day to lay track during a 10-hour workday. The news quickly spread that the Sunrise Mine paid $2 for a 10-hour day, meaning that many railroad companies throughout the Midwest had to search for replacements.[5]

Rivals since ancient times, the Italian and Greek sons shared similar experiences in the new country. In America, their muscle built the railroads, toiled in the sweatshops and dug the ore that fueled the bustling nation. Common elements to these jobs were long hours and occasional danger, job qualities increasingly shunned by native-born Americans.

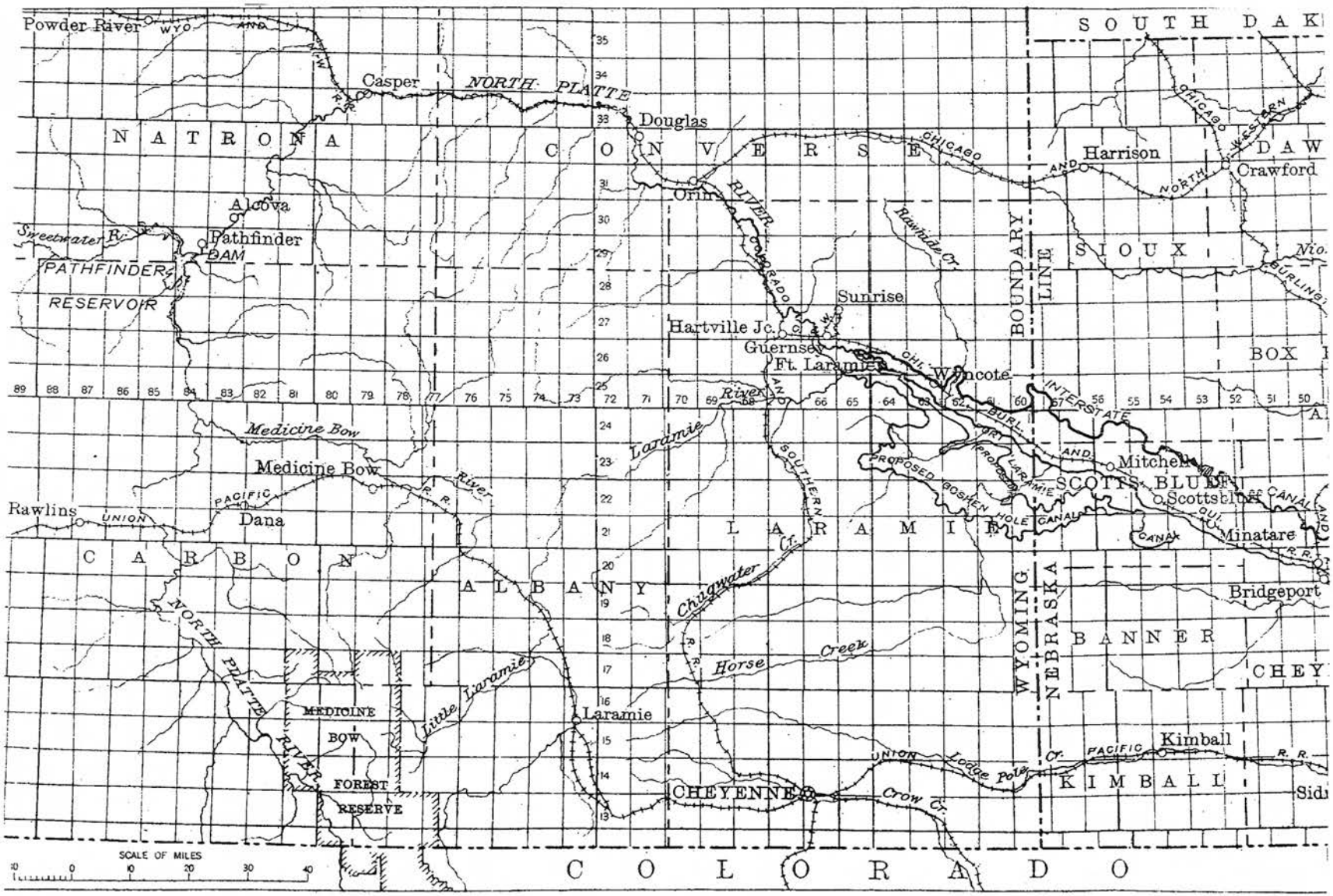
One of those men who quit the railroad gang for mining was George Costopoulos. According to his son Nick, George's first job in America was with the Union Pacific Railroad in the 1880s. His knowledge of English served him well as an interpreter for the Greeks who made their way to the Sunrise Mine. After George settled at Sunrise, a brother, cousins, and other families from the same village all came to the United States. The language barrier could be tough for new arrivals. Nick Costopoulos related that all of Sunrise's foremen and managers spoke only English. Those unfamiliar with the language, according to Costopoulos, were treated like "peons." [6]

Italians followed a slightly different route to Sunrise. Many Italian immigrants worked Minnesota's Mesabi Range and Iron Mountain in Michigan in the mid-1890s. Letters and conversations with family and friends brought the word of better paying jobs in the mines of Wyoming. The first Italians arrived in late 1899, a few months before the first Greeks. Almost to a man, the Italians and Greeks first lived in shacks and dugouts on the outskirts of Sunrise. The company soon replaced the hovels with "neat square cottages all of the same dimensions" for miners with families. Single men found their board in the company-built bunk houses. Nick Costopoulos related that five or six men lived in two rooms, sleeping in shifts.[7]

The gathering of Greek and Italian immigrants stirred fear among established residents that Sunrise was in danger of becoming "a foreign community." This prejudice quickly took hold and lingered for many years. A 1938 Works Progress Administration (WPA) history of the town illustrates this resentment. The author of the sketch, Alice Catlin Guyol, was part of a family who lived in Sunrise before the turn of the century. She saw the miners as a multi-ethnic mob that came "to this country for what they could get and had no conception of giving." Guyol also charged that the immigrants lacked "community spirit," and spoke their own languages, only using "such broken English as was necessary for their work."[8]

CF&I's own records demonstrate that Sunrise and Hartville did not have time to absorb the newcomers. Almost overnight, the immigrants overwhelmed both towns. In just two years, management counted 75 Italians, 55 "Americans," and 34 Greeks among the 205 men working for CF&I and the Colorado and Wyoming Railway Company. The remaining 40 people came from other European countries. Nick Costopoulos called Sunrise under CF&I, "a U.N." forty years before the birth of the United Nations. This gathering of many peoples was common throughout the CF&I satellite system. However, the rapid changes at Sunrise and Hartville caught both the towns and company off guard.[9]

Realizing the potential for trouble among the 32 different nationalities employed throughout the CF&I chain, the company created a special branch to collect information on how to get the immigrant groups to



GENERAL MAP NORTH PLATTE PROJECT

work together. In 1902, CF&I's Pueblo-based Sociological Department studied ethnicity and labor in their camps to improve productivity. One of the first departmental studies concluded that "Mexicans will associate with Mexicans, Italians with Italians, English-speaking with English-speaking," and much to the department's dismay "any attempt at admixture of races comes to grief." Armed with this information, managers at each mine sought "specialization of work among special classes" to keep production figures climbing. On the job site, this meant certain ethnic groups did specific jobs.[10]

Italian immigrants figured prominently in the Sociological Department's early studies. Northern and southern Italians and Sicilians injured in mine accidents, occasionally skirmished on the grounds of the convalescent hospital in Pueblo. One doctor reported: "Not infrequently has it developed into a really warlike situation, shown on several occasions on the Hospital lawn by convalescent patients hurling at each other canes and crutches and other instruments of war."[11]

While the Italians reenacted ancient blood feuds on the lawn of the Pueblo hospital, their brethren in Wyoming moved freely to and from the company towns. In February 1902, the company magazine, *Camp and Plant*, reported the departure of ten Italians loaded down "with a goodly supply of Uncle Sam's gold," earned by their work in the mines. Mine management did not despair, because within ten days "fifteen more (Italians) came to fill the vacancies." Some returned to Italy, while others went in search of jobs elsewhere in the United States. A number of Italians stayed near the mine, raised families, and retired after a lifetime of service to CF&I.[12]

The Greeks assimilated well in the workplace, but their bosses noted how much they kept to themselves off the job. A report in a Cheyenne newspaper, the *Wyoming Tribune*, illustrated the closeness of this community in the aftermath of a mining tragedy. In the spring of 1907, flying rock crushed a Greek miner, and 150 of his countrymen attended the funeral. The miners called upon a cleric of the Greek Orthodox Church to come out and preside over the rites. That night in the saloon of Theo Kisciras, the mourners "concluded the ceremonies of respect to the memory of their departed co-patriot with wine and wassail." The *Tribune*'s correspondent marveled that "Jap, Greek, Italian and aliens of every tongue work side by side with the native-born risking their lives at the hardest labor for their daily wage" at the Sunrise Mine.[13]

Most common laborers either mined underground or loaded and transported the ore above ground. In 1899, Colorado Fuel & Iron first signaled that the Hartville uplift was theirs with dynamite blasts that tore off chunks of ore from the hillside. Crews lifted the blasted fragments with ninety-ton and sixty-ton steam shovels. The *Wyoming Tribune* pictured the ninety-ton Model K shovel plucking "out the iron dirt like a human hand" before dumping it into waiting rail cars. Railmen then directed the cars on to three-side tracks before transfer to the CF&I operated Colorado & Southern mainline. A camp laboratory conducted an assay for iron, phosphorus, and silica before telegraphing the findings to the main office in Pueblo each day.[14]

Shovels stripped two separate pits of the overlying cap rock. Three crews using Sullivan pattern diamond drills tested the surrounding holdings for iron ore. Laborers followed the standard open-pit methods in gathering the ore. Both pits maintained a 60-degree slope angle by scaling the walls at regular intervals, despite eventually reaching a depth of more than 500 feet below the surface.[15]

These straight open-pit methods lasted for only two years because of the increasingly steep grade the railroad had to climb out of the pit. The mine's new superintendent, F. R. Ahbe, devised a solution to the grade problem soon after his arrival in 1903. Ahbe ordered the construction of a 3-compartment shaft, 6 X 18 feet, built on the schist adjoining the hematite. Miners carved a 470-foot shaft out of the hill and ran levels under both pits at the 200-foot elevation. A head frame with two skips hoisted five tons of ore per minute for loading. In this system, the mine trains only had to climb a 3 to 3 1/2 percent grade. This was the nation's first "glory hole-open pit" mine. By 1904, a year after Ahbe's arrival, the established routine was either to hoist the ore through Shaft No. 1, or to strip the surrounding landscape with steam shovels. The glory hole-open pit method increased the number of jobs for both skilled and unskilled laborers. According to recollections of different miners, most Italian laborers preferred the higher paying underground jobs—breaking and loading rock—while the Greeks, who chose to stay above ground, transported the ore by rail from the mine site for slightly lower wages.[16]

With glory hole-open pit mining, CF&I almost immediately increased the profitability of the Sunrise Mine and, in turn, the entire CF&I system. By 1905, miners had extracted 600,000 gross tons of crude ore worth about $1.50 a ton with an estimated value of $900,000.[17]

Mining's hegemony over this corner of Wyoming lasted for only half a decade. Running to the south of

the Sunrise Mine, the North Platte River, served as a natural guidepost for pioneers following the Oregon Trail. While other regions of the West filled with people, the North Platte River Valley remained underpopulated. The desire to reclaim the arid spaces of the West had been a topic of national debate for most of the latter half of the nineteenth century. In June 1902, President Theodore Roosevelt signed the Newlands Act to create the United States Reclamation Service (USRS). To lure homesteaders to the valley, the federal government planned a dam and canal system to irrigate an 111-mile stretch of Wyoming and Nebraska. The North Platte Valley, along with the Salt River Valley in Arizona, the Newlands Project in Western Nevada, and the Grand Valley Project near Grand Junction, Colorado, were among the first laboratories for federal engineers trying to transform the West's dusty vistas into thriving farm and pasture land.[18]

The North Platte Project sought to turn 390,000 acres of buffalo grass in Wyoming and Nebraska into homesteads for families. Agriculture in this region would serve two purposes: to graze cattle and grow sugar beets. In 1904, after two years of surveying, the USRS selected a damsite three miles below the junction of the North Platte and Sweetwater Rivers. The project's centerpiece, the 214-foot high stone and mortar Pathfinder Dam, earned the nickname of the first American to explore the region, John C. Fremont. The mouth of the Sunrise Mine was a little more than a hundred miles from the junction of the North Platte and Sweetwater Rivers.[19]

In 1905, the Reclamation Service chose a Denver contractor, Geddis and Seerie Stone Company, to build the dam. Geddis and Seerie preferred to bring their own men up from their Denver headquarters. Smaller contractors selected to dig the canals did not have the resources to bring and keep large numbers of men. Finding laborers to come and work in barren Wyoming and Nebraska bedeviled both the USRS and all the contractors over the next four years. Location was the root of this problem. One Reclamation engineer noted after his arrival at the canal site that he could only see "the remoteness of the project, the poor roads in places little better than trails."[20]

In early 1905, the government awarded another contract to Robinson and Maney of St. Louis to dig six of the ten divisions of the 95-mile long Interstate Canal. The canal would deliver water from the Pathfinder Dam reservoir to lands under subscription with the federal government. The contractors and federal officials agreed that the first 20 miles of the scheduled 45 miles of the first division posed the greatest dilemma. When construction began in July 1905, the primary concern was clearing a mile of canal passing through broken sand hills.[21]

In October 1905, one hundred new men came to work on the canal's first two divisions. Robinson and Maney hired Italians from the Sunrise Mine to clear rock and drive teams. Reclamation's engineer in the field, John E. Field, reported: "Contract has been made with these men, who are Italians, I understand for six months. It is expected that another gang belonging to the same colony will be put to work in a few days." Greeks, also by way of Sunrise, soon joined the Italians, English, Irish, Danes, Scotch, Swedes, Germans, and Americans who traded in their picks for Mormon scrappers and reins to drive a team of horses. The federal government paid slightly more than CF&I, common laborers earning from $2.36 to $2.40 for an eight-hour day.[22]

Like the sanctimonious burghers of Sunrise and the Sociologists of CF&I, Reclamation's Field believed that a correlation existed between ethnicity and job abilities. Based on foremen's reports and his own observations made at the canal, Field believed Greeks were poor teamsters who kept too much to themselves, and Italians were "slow and incompetent." Those in charge also perceived the workers as too stubborn to learn the new skills required to dig a canal. In 1906, Field related, "I have been told by almost every foreman that he scarcely dares order a man to change his methods or to criticize him in any way for fear that he will immediately leave. These laborers almost invariably quit after a small sum is paid them." In spite of this temperamental workforce, laborers excavated three million cubic yards of earth, and the first 45 miles of the canal were completed within a year.[23]

Both CF&I and the USRS shared a strict belief in prohibition in their camps and communities. The son of one miner, Dante Testolin, remembered, for example, that the southern Europeans living in CF&I boarding houses made their own wine from 30-lb. boxes of imported grapes. Honoring cultural traditions such as wine drinking came at a heavy price at Sunrise. CF&I laid-off men for up to 30 days if caught drinking. On the dam and canal construction sites, Reclamation Service officials were constantly looking for supply wagons carrying concealed bottles of whisky. The remoteness of USRS worksites did, however, have advantages. One engineer commented, "The nearest saloon being 15 miles away has undoubtedly much to do with keeping a fair class of men here."[24]

In addition to the North Platte Project, the USRS used mine laborers to complete dams in Wyoming and

Montana. On the Shoshone Project in northwestern Wyoming and the Huntley Project in southern Montana, miners were the most common workers in the labor pool available to the Reclamation Service. Like North Platte, the isolated Huntley Project could rarely find and hold enough men. The contractor for the Shoshone Project traveled as far as Miles City, Montana, some 200 miles to the northeast, in search of workers. After a few days in Miles City, the contractor's agent grumbled that they "could get no one but Dagoes." He was angry that his company was willing to pay them "$3.00 per day and half their R.R. fare." The USRS had better luck luring workers from the copper mines outside Butte, Montana. In 1906, Shoshone Project supervising engineer, H. N. Savage, preferred to promote miners to jobs as foremen as a reflection of "their good character" and "previous experience (that) can be adapted to driving tunnels."[25]

During 1907-1908, while federal dams were going up across Wyoming, CF&I steel endured a system-wide production slump. Decreased production meant layoffs at the Sunrise Mine, so the company tried to find their men temporary work during the downtime. Most of those laid off found work with the Colorado & Southern Railroad or with the Great Western Sugar plant in Scottsbluff, Nebraska. In the interviews Mellinger conducted in the mid-1960s, no one, not even Nick Costopoulous, mentioned going to the Pathfinder Dam for a job during layoffs. The Reclamation Service's records on this question are incomplete. Regardless, the dam did need workers, some of them probably came from CF&I during the Sunrise Mine's shutdown.[26]

Eschewing ceremony, the USRS declared the $2.2 million dam complete in June 1909. Evidence suggests also that no Sunrise miners exchanged their picks for plows, because most of the homesteaders on the North Platte Project came from farming backgrounds in eastern Colorado and Kansas, and parts of Nebraska.[27]

The immigrants who stayed in Sunrise to work the mine never did win over the town's establishment. As late as the 1930s, those immigrants still living near the mine lacked any "civic responsibility, except as a means to their own ends." Guyol complemented the children of these immigrants, born American, for their "different attitude" illustrated by their willingness to speak English at home and their demanding for "American style clothing and food."[28]

Some sixty years after completion of the North Platte Project, the Bureau of Reclamation (The USRS became the Bureau of Reclamation in 1923) honored the diversity and mettle of the project's laborers in its *Reclamation Era*. The article remembered men "bearing names of O'Toole, Morelli, Weder, Kajutis, Geko, and Moore," who "alternately sweat and froze for about 35 cents an hour." Reclamation's return to eastern Wyoming in the 1920s would again link the paths of business, government, and two towns. With the completion of the Guernsey Dam in 1927, the region's first hydroelectric plant furnished electricity for the Sunrise Mine and the towns of Sunrise and Hartville. The mine had a long, profitable run before CF&I closed it in 1982.[29]

The story of the Sunrise miners is absent of many of the voices of those who first brought the language of hard work to eastern Wyoming. We can only hear the generalities expressed by their corporate and bureaucratic masters. The exasperation, and occasional prejudice, of native-born mine managers, engineers, and contractors reflects the general attitude of the time. The majority of the native-born owners wanted workers, not neighbors. Labor, in its most basic and back-breaking element, sustained a private mining empire and opened new federal lands to agricultural development. Without these newcomers, CF&I could not have thrived and survived as one of the West's largest employers and steel producers; likewise, the federal government's plans to increase agricultural acreage would never have flourished without the effort of the immigrant workers.

NOTES

1. Lee Scamehorn, *Mill and Mine: The CF&I in the Twentieth Century*, (Lincoln, Neb.: Univ. of Nebraska Press, 1992), 2; U.S., Department of Interior, Bureau of Reclamation, *Annual Project History, North Platte Project*, Vol. 69, 1981, 1.
2. *Wyoming Industrial Journal*, (August 1904), 63-4; "Sunrise was First Mined for Copper," *CF&I Blast*, 28 September 1945, 3; *Engineering and Mining Journal*, (October 5, 1895), 320-21.
3. "The Iron Mines at Sunrise, Wyoming," *Camp and Plant*, (February 15, 1902), 146; (January 11, 1902), 57; (May 24, 1902), 434; *Denver Times*, 5 June 1900, p. 3; *Pueblo Star-Journal*, 26 February 1907, no page number.
4. Philip J. Mellinger, "Early Hartville and Sunrise: A Study of the Frontier and Immigration in Wyoming," (M.A. thesis, Chicago: Roosevelt Univ., 1969), 264; *Hartville Uplift*, 19 February 1910, p. 10.
5. Mellinger, "Early Hartville and Sunrise," 58, 66-8, 104; *Wyoming Tribune*, 27 March 1907, no page number.
6. Telephone interview with Nick Costopoulos, March 11, 1996.
7. "Early Hartville and Sunrise," 66-8; *Wyoming Tribune*, 27 March 1907, no page number, interview with Nick Costopoulos.
8. Alice Catlin Guyol, "Hartville," typescript, WPA files, Wyoming State Archives, (Cheyenne: 1938), 7.
9. "The Iron Mines at Sunrise, Wyoming," 147; interview with Nick Costopoulos.
10. Colorado Fuel & Iron Co., *Annual Report of the Sociological Department of the Colorado Fuel & Iron Company for 1901-'02*, (Pueblo, CO.: 1902), 14-5. Located in the Colorado Historical Society Archives, MSS-1057, Box 6.

11. *Annual Report of the Sociological Department of the Colorado Fuel and Iron Company for 1901-02*, 15.
12. "The Iron Mines at Sunrise, Wyoming," 147; "Early Hartville and Sunrise," 104.
13. *Wyoming Tribune*, 27 March 1907, no page number.
14. "The Iron Mines at Sunrise, Wyoming," 146; *Wyoming Tribune*, 27 March 1907, no page number.
15. "Sunrise Mine Furnishes Most of CF&I Iron Ore," *CF&I Blast*, September 28, 1945, 12.
16. "Sunrise Mine Furnishes Most of CF&I Iron Ore," 12; *Wyoming Industrial Journal*, January 1903, 189; *Wyoming Industrial Journal*, February 1904, 230.
17. Colorado Fuel & Iron Co., *14th Annual Report of the Colorado Fuel & Iron Co., Year ending June 30, 1906*, (Pueblo, 1907), 3, 7.
18. P.I. Taylor, "Pathfinder Dam," *Dams and Control Works*, (Washington, D.C.: United States GPO, 1929), 28.
19. Taylor, "Pathfinder Dam," 28. Fremont, according to his own account, almost died rafting down the North Platte in 1842 near the site later selected for the Pathfinder Dam.
20. U.S., Department of Interior, Bureau of Reclamation, Record Group 115, Box 761, *General Administrative and Project Records, 1902-1919*, "Report by E.H. Baldwin, January 2, 1906," 1; Box 978, *General Correspondence Files*, "Project Folder Draft: December 20, 1915," 11. (Located at National Archives and Records Center, Denver. Record Group 115 hereafter noted as RG 115). A contemporary of the Pathfinder Dam, the Theodore Roosevelt Dam on Arizona's Salt River Project, shared a similar design. An important distinction between the two structures was Roosevelt's contractor importing Italian stone masons, by way of Pittsburgh, to fashion the dam's face.
21. U.S., Department of Interior, United States Geological Survey, *Fourth Annual Report of the Reclamation Service, 1904-05*, (Washington, D.C.: United States GPO, 1905), 237.
22. E.H. Baldwin, "Construction on the Pathfinder Dam, North Platte Project, U.S. Reclamation Service," *Engineering News*, (October 29, 1908), 463; RG 115, Box 1, *General Administrative and Project Records, 1902-1919*, letter from John E. Field to C. E. Wells, 5 October 1905. Wells was the North Platte Project's supervising engineer.
23. *General Administrative and Project Records, 1902-1919*, letter from John E. Field to C. E. Wells, 7 August 1906.
24. *Early Hartville and Sunrise*, 100; RG 115, Box 761, *General Administrative and Project Records*, letter from Frederick H. Newell to Arthur Powell Davis, 7 July 1905. Davis later served as Director of the Reclamation Service.
25. RG 115, *General Administrative and Project Records, 1902-1919*, letter from H. N. Savage to Frederick H. Newell, 24 September 1906; letter from H. N. Savage to Frederick H. Newell, 29 October 1907.
26. "Early Hartville and Sunrise," 106; interview with Nick Costopoulos.
27. RG 115, Box 978, *General Correspondence Files*, "Project Folder Draft: December 20, 1915," 12.
28. Guyol, "Hartville," 8.
29. Nello Cassai, "First Dam on the Wild North Platte," *Reclamation Era*, (November 1968), 105-06.