

PROGRESSIVE TRANSFORMATION: THE DEVELOPMENT OF UTAH COAL

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Through a brief review of Utah's coal history, a few trends and watersheds appear. First, except for the very early period when coal was in demand primarily as a home-heating fuel (still a limited use), coal mining has acted as a support for other industries. The linkage is most evident with railroads, as a fuel, and with metal mining, as coke for smelters. Coal has played additional roles as a factory fuel (to power steam-driving engines of all types) and, most recently, to produce electricity, now the primary energy source. By tracing its usage one may also identify the process of coal mine development and more clearly define the economic role of Utah coal.

During the years 1900 to 1918, Utah's coal industry became more closely wedded to outside corporate structures. The railroads, hampered by federal anti-trust suits, stood by while successive capitalists acquired Utah coal mines as part of their own vertical integration. Control of some mines passed to international conglomerates such as American Smelting and Refining and United States Smelting, Refining and Mining, thus further enmeshing Utah coal in outside capitalist systems. As this economic transformation occurred, the new mine owners absorbed almost all small mines that had existed side-by-side with the earliest railroad developer. Eastern Utah became permanently tied to outside forces, in a typical outcome of Progressive Era consolidation.



The Utah coal mining industry has undergone a series of changes since coal was first discovered in Iron County in 1851. At that time, Utah was in the throes of an economic system characterized as "community cooperation" by economic historian Leonard J. Arrington.¹ The Mormon empire strove

toward self-sufficiency by developing all the necessities of life, including iron, which was utilized for farm implements, nails, horseshoes, and tools of all kinds. Iron had to be smelted in coal-fired furnaces, and supplies of the soft, black mineral lay close at hand. Men called by the LDS Church (the Church of Jesus Christ of Latter-day Saints, or Mormons) to the pioneer Iron Mission included several converts from England and Wales, experienced in coal mining, to dig the fuel on which Utah's nascent iron industry depended. Yet one problem followed another. The Iron Mission produced very little iron, due in part to the low grade of coal locally available that proved inefficient for smelting because it would not coke. This coal derivative could only be made from certain bituminous grades, processed by controlled burning in specially constructed ovens. Charcoal, a possible smelting substitute, required wood, a substance noticeably lacking throughout much of the American West. After the failure of the Iron Mission in 1858, Mormon Utahans deserted the field of hardrock mining, thereby lessening the local demand for coal.²

For a period, Utah coal found a market only as a home heating fuel. So great was the need for coal in arid Utah, especially in populous areas, that the state legislature offered a \$1,000 reward to anyone who located a coal bed at least eighteen inches thick within forty miles of Salt Lake City.³ Coal explorations led to the opening of the Coalville deposits in 1859. A wagon road and later a railroad connected these mines with Salt Lake City, their greatest market. This railroad construction marked the next step in Utah's coal mining development.

After completion of the transcontinental railroad in 1869, coal found another major market: as a railroad fuel. The insatiable appetite of railroad steam engines for coal demanded large-scale mining development. The Union Pacific Railroad gained control of the Coalville production in 1875, when the Summit County Railroad, a Mormon cooperative project, went into default.⁴ In competition with Union Pacific, the Denver and Rio Grande Western Railway (D&RGW) pushed into Utah in the early 1880s. As it moved into the eastern part of the territory, company geologists

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explored the surrounding cliffs for the necessary fuel.⁵ Through related companies, notably the Western Construction Company, the Pleasant Valley Coal Company, and, later, the Utah Fuel Company, the D&RGW began acquiring coal lands and developing mines.⁶ These related companies provided the first commercial development of the mineral wealth found below the soil of what would later be Carbon and Emery counties, a district also known as Castle Valley. Eastern Utah coal was of a higher grade than the Coalville and Iron County beds. Some of it would coke, opening new options for the smelting industry.

The period of railroad coal mine development, from the 1870s until the 1930s, has been defined by historian Leonard Arrington as a period of "collective capitalism."⁷ Although the impulse of Big Business was to collect as many industries as possible under one corporate roof, the capitalism of the era was as much competitive as collective. Throughout this period, smaller industries competed unevenly with larger concerns. Utah-based capitalists and outsiders alike developed mines, often establishing a pattern of vertical integration. For example, in 1889 several coke ovens were built at the D&RGW mine of Castle Gate.⁸ The railroad then shipped the coke to affiliated smelters at Pueblo, Colorado driving up coal prices throughout the West.⁹

Incipient competition for coal between home-fuel users and large-scale industry created some interesting situations in the Utah trade. As Carbon County pioneer Teancum Pratt described his situation:

We are subject to heavy [coal] extortion by R.R. Co. [D&RGW] & so learning that the Sowbelly canon was vacant I . . . took my last money . . . to file on some [coal land] claims.

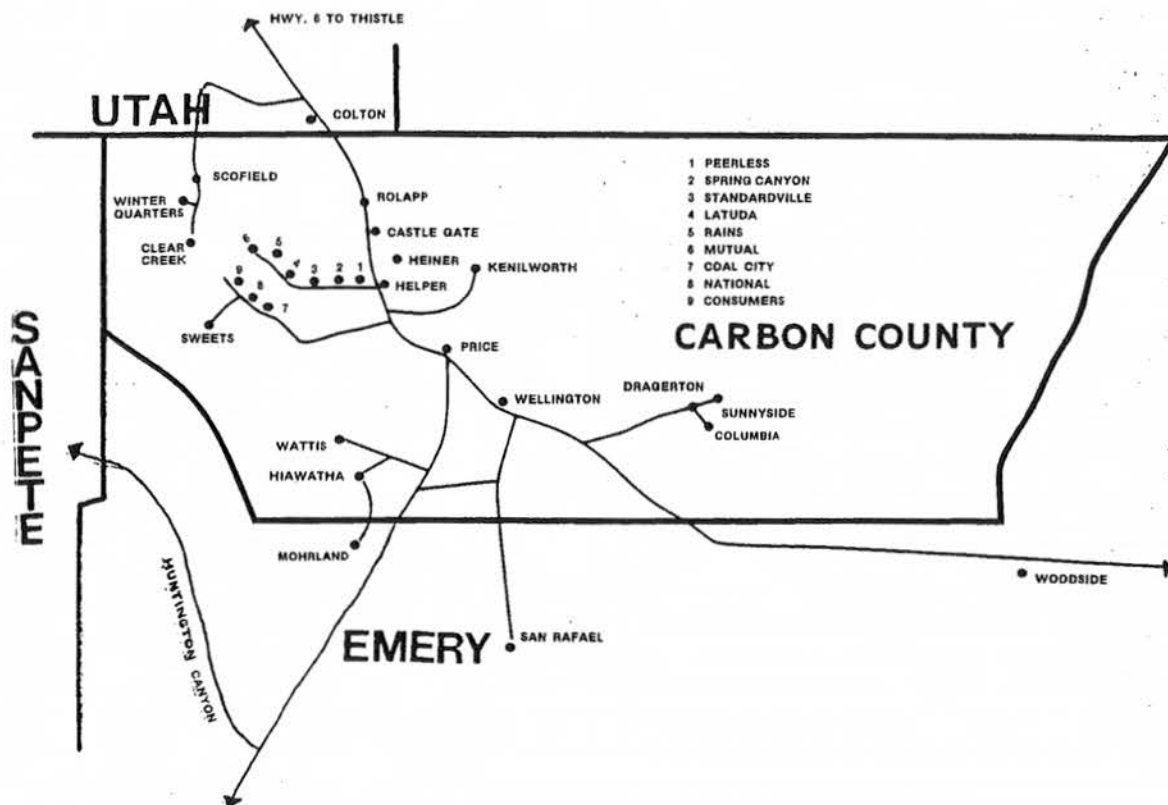
. . . Our main purpose [was] . . . to get coal for our own fires but to our surprise the Castle Gate



The original appearance of Castle Gate rock, the "gateway" to Carbon County and emblematic of the rock formations for which Castle Valley was named. (Courtesy of the Western Mining and Railroad Museum, Helper, Utah.)

Mine has never tried to interrupt our trade at Helper & we have done very well at selling coal. . . . In the spring of 98 the R.R. Co. commenced building houses at Helper and being the sole owner of the mine [by then] I went & asked . . . if I could supply the company houses.¹⁰

Pratt got the contract for home-fuel coal simply because the railroad had more lucrative, easily exploitable markets and was not interested in this low-volume trade.



Map of eastern Utah showing main coal mines and towns around 1940. Names of service towns (as opposed to mining towns) are underlined. (Courtesy of Western Mining and Railroad Museum, Helper, Utah.)

As western mining rushes continued and new inventions increased the uses of metal (such as copper for wires to conduct that new source of power, electricity), the demand for coal and coke also grew. In 1904, the Utah Fuel Company signed a contract with Anaconda Copper Company of Montana to provide its coke. Its smelters required 150 to 200 tons of coke a day for their operation. By 1907, the Price weekly newspaper reported that Utah Fuel was netting \$2.75 per ton of coal shipped. Their output that year totaled 1,749,363 tons, resulting in a reported profit of \$4,810,748.¹¹ This income not only indicated the wealth and power of Utah Fuel, but marked a significant contribution to Utah's total economy.

Up to this point in history, those likely to invest in Utah coal mines were few and easily identifiable. First, ordinary people with a need for warmth and cooking fuel owned some "wagon" mines, so called because coal was dug as needed and hauled to town by wagon. Because of the cooperative nature of the Mormon economy, collective ownership by the group (ward, stake, branch or United Order) also formed a part of the picture. The railroads--notably the Union

Pacific and Denver and Rio Grande Western--acquired mines to fuel their trains and to provide commercial trade in an area where passenger service was minimal and manufacturing almost nil. Yet, as already noted, the railroads charged "extortionate" rates for their coal, not only to the small consumer but probably to non-related large industry as well (as revealed by their profits in 1907). Once metal mining and smelting were well-established (usually through the consolidation of the two), corporate owners began to seek new ways to cut expenses. In this, they were joined by other industries dependent on coal-fired engines, the result of the growth of the factory system in the late nineteenth century. Throughout the Progressive Era (1900-1917) Utah coal mines were increasingly acquired by all sorts of businesses that utilized coal as fuel. Although many continued to rely on the same railroads for transportation, federal trust-busting activities, exemplified by the Hepburn Act of 1906, somewhat curtailed railroad monopolistic tendencies. New owners had less to fear from railroad competition, and a diversity of acquirers entered the field. Some of them were Utah concerns, others controlled international commercial empires. Yet all

viewed coal as a secondary support for their primary industry.

As a result of these progressive-era acquisitions, Utah coal became a minor part of a larger corporate network bent on increasing overall profits without regard for individual components. Coal mining, as a "handmaiden" industry, suffered increasingly dramatic setbacks in the face of wide-spread economic fluctuations after this industrial consolidation. For example, of primary importance to the coal industry was the growing use of electricity, beginning in the 1910s. Coal was then in great demand for smelting copper, which was made into electrical wire to be strung across the nation. Once the new energy system became operative, however, copper smelting decreased and coal found itself replaced by an energy source it had helped to foster. The final event marking the temporary demise of Utah's coal industry was the Great Depression of the 1930s. By this time, all geographical regions of America, and all economic sectors, had become so closely linked that none could escape the general financial catastrophe.

The advent of World War II reversed the downturn. Once again, coal was in demand, fueling the nation's factories as the country geared up for a war-time orgy of manufacturing. In 1944, Utah coal production reached a new high of more than seven million tons, a figure unmatched until 1976.¹² The federal government also began investing more money in the West during the war for construction of power and reclamation projects, defense installations, and related industries. This multi-billion dollar investment has led Professor Arrington to describe the western economy of the post-1940 era as federally-funded collectivism.¹³

Although Utah's overall economic health may have been assured by this infusion of federal monies, the coal industry suffered when industry turned to alternate fuels. Factories switched to cleaner, cheaper electricity generated by natural gas and water power. Consequently, demand for coal dropped dramatically. A localized depression gripped parts of Utah throughout the 1950s and 1960s. Carbon and Emery Counties, which by 1970 had produced 77.7 and 19.0 percent of Utah's total coal production respectively, weathered a twenty-year slump.¹⁴ After 1970, the use of coal-fired plants to generate electricity again created a demand for coal (once more as a handmaiden industry) and production has since generally been on the rise.

As this synopsis suggests, the Progressive Era marked the great watershed in the history of coal mining in Utah. Ever since then, Utah coal has been inextricably linked to a geographically widespread

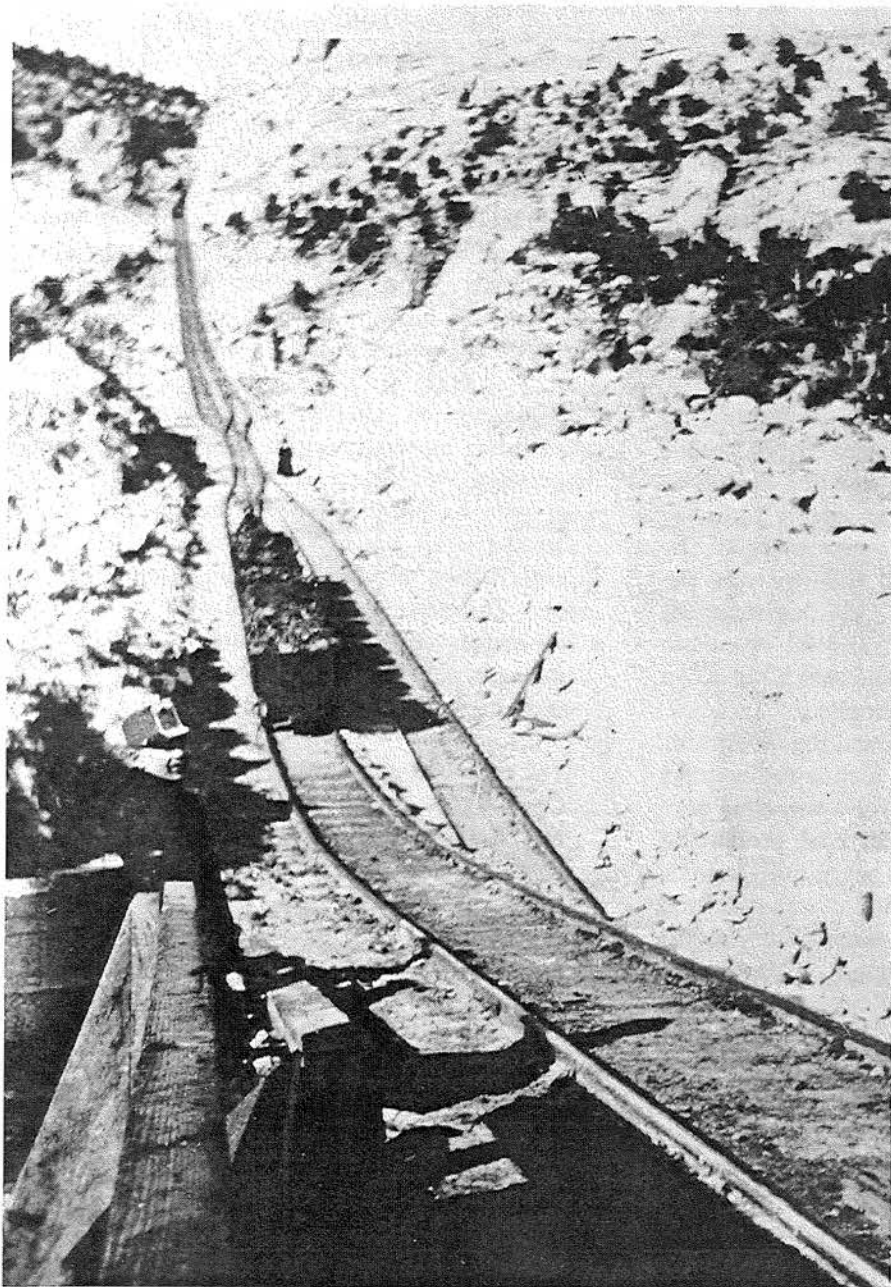
variety of related industries, making it susceptible to the vagaries of the national and international markets. The specifics of the era -- its events, individuals, corporations, and public policies -- therefore deserve further study.

The Utah coal industry of the early 1900s responded to a number of influences, both domestic and foreign. The course of its growth was shaped by events on the local, state and national levels. With the growth of international linkages of coal supported industries, international events created a boom or bust in Utah coal.

Influences on Utah's coal economy are easily identifiable, especially on the local level. Of primary importance was the location of coal. All major Utah coal beds had been identified by 1900. The most extensive fields lay in Carbon and Emery Counties (Castle Valley), therefore, this study will focus on that area. The State Coal Mine Inspector's Report for 1899 lyrically described the nature and extent of those deposits, and extolled the advantages of a regional market network:

The time had come to open up the coal fields of Castle Valley, in competition with other fields for the supply of Southern Utah, Nevada and Southern California. The advantage these fields have over others is the unsurpassed quality and the unlimited quantity. . . . The veins are of the most desirable thickness. . . . There is plenty of timber for mine uses in the surrounding hills . . . the coal fields can be reached by rail, with slight grades. All that is needed to make these fields superior to others is organized capital to operate them on a large scale.¹⁵

The State Coal Mine Inspector proved prophetic, for investors bearing capital soon arrived. Some were already involved in local enterprises and decided to branch out into this clearly lucrative venture. Local citizens included the Whitmore brothers, James M. ("Tobe") and George, who began as ranchers, did well, and opened the First National Bank of Price, "The Oldest and Strongest Bank in Eastern Utah."¹⁶ As one local citizen recalled, "Tobe . . . if he didn't own all the bank, he owned most of it."¹⁷ The Whitmores teamed with Alf Ballinger, owner of the Price Trading Company (eastern Utah's largest mercantile establishment), to develop the Aberdeen Mine near Helper. Although initial work began in 1896, by 1906 the Aberdeen still employed only four men. This number did not increase in 1907, when it was acquired by the Independent Coal and Coke



The Kenilworth tramway around 1907, with a pair of loaded coal cars headed down from the mine. Its construction marked the beginning of major independent capital investment in the commercial development of eastern Utah coal. (Courtesy of the Western Mining and Railroad Museum, Helper, Utah.)

Company (IC&C), originally chartered in Wyoming. However, in that year the neighboring Four Points Mine, previously unmentioned in Utah mining surveys, employed 105 workers, and both it and Aberdeen had been united by IC&C in a new development, called Kenilworth.¹⁸

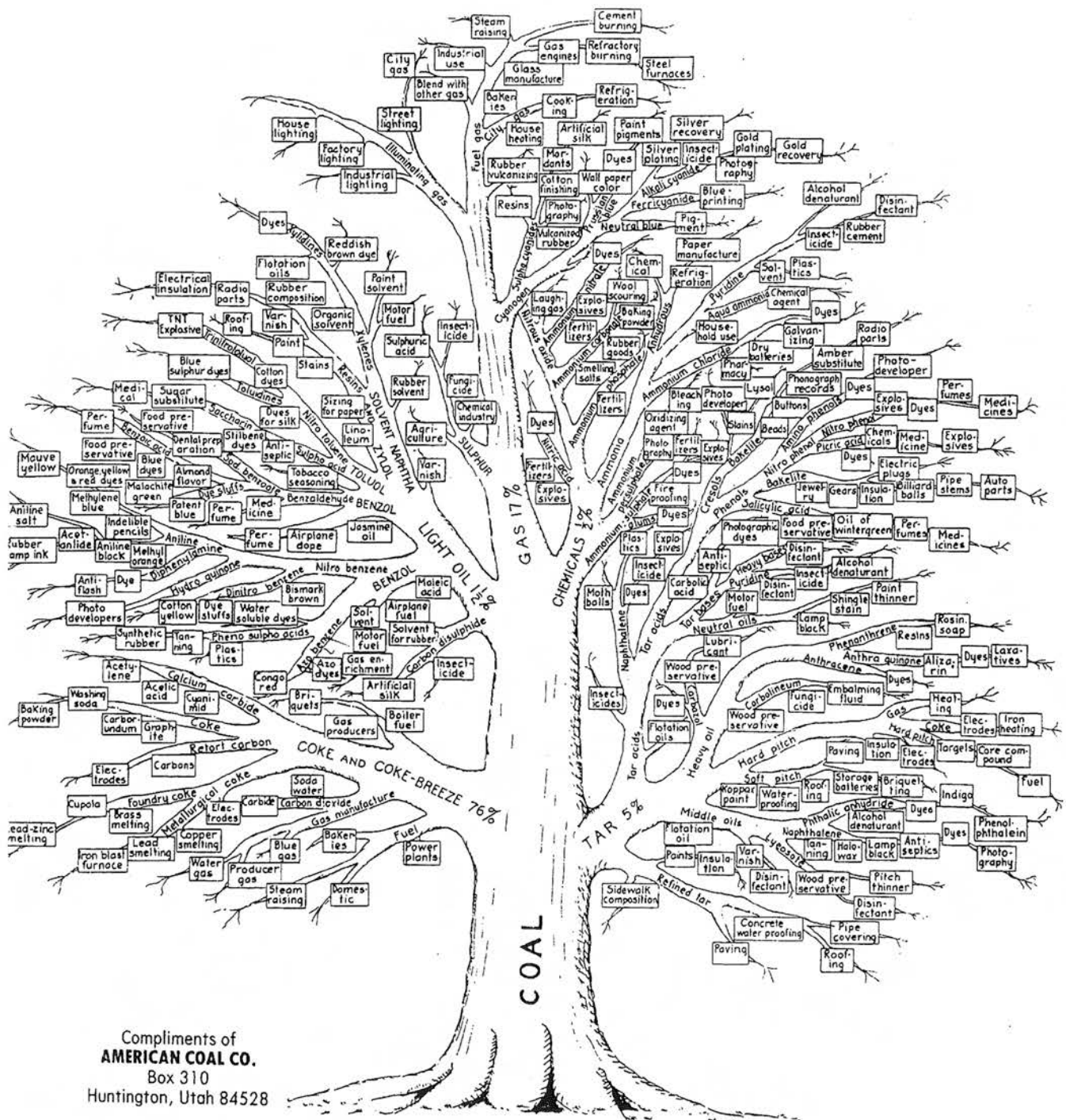
Prior to Kenilworth's large-scale commercial development in 1907, eastern Utah's coal industry was monopolized by a single concern: the Denver and Rio Grande Western Railway and its related companies,

the Pleasant Valley Coal Company and the Utah Fuel Company. Together they owned all the large mines, all the coking coal, all the coke ovens, and the only efficient form of transportation in eastern Utah essential for conveyance of commercial quantities of coal.

This situation probably would have continued undisturbed, had not the federal government declared war on America's foremost monopolies, the railroads. This assault not only prompted the Congressional passage of the Hepburn Act in 1906, it also inspired the Executive Branch, especially the Department of Justice. The local Price newspaper, in September 1906, ran a story stating that President Theodore Roosevelt and Interior Secretary Hitchcock were behind suits brought against Utah Fuel as they wanted "to recover every foot of coal lands acquired by Gould corporations," (referring to the chief owner of the D&RGW). Utah Fuel fought back, but the federal grand jury in Salt Lake City returned new indictments against Utah Fuel in 1907. Litigation dragged on, with cases against the company still pending in 1910. Consequently, the railroad's control of coal lands in Castle Valley was effectively curtailed for a number of years.¹⁹ Other investors saw an ideal opportunity to benefit from the railroad's woes. In addition, the

"Bankers' Panic" of 1907 had a terrific impact in the Utah coal industry, as described by the State Coal Mine Inspector:

The recent monetary disturbance has affected the coal mining industry in Utah very materially. After the closing of the mine and smelters in Montana, it was necessary to close the 204 coke ovens at Castle Gate. This was followed by the closing of several metal mines and smelters in



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Showing the products obtainable from coal by carbonization in the modern by-product coke oven.

Utah, which partially closed down three of our coal mines, and caused a reduction of working forces all along the line.²⁰

Although the workers may have suffered unemployment, the scarcity of coal drove up its price. As one Chicago entrepreneur noted in 1908, "Since the great coal shortage last fall in the West, no doubt there has been a great effort on the part of capitalists and others to open up new coal fields . . . for producing coal to go into commercial channels."²¹ He was right. The era of new coal ownership was at hand. Utah capital funded most of the large-scale coal mining developments of the early 1900s. Names famous for other endeavors—Sweet, Knight, Browning, Eccles—dot Carbon coal company articles of incorporation. In some cases, these Utah capitalists opened mines and then sold out to even larger concerns, such as USSR&M and ASARCO. In other instances, however, they retained their coal holdings as part of the vertical integration of their initial businesses or as further investment.

The Sweet Family initiated this large-scale investment in Utah's coal mines. As early as 1906 the Sweet brothers had money to invest in coal development. The local newspaper announced their purchase of a mine on December 27 and predicted its opening the following June.²² One brother, Charles Nelson (or C.N.), held the coal land lease for 1907; the Southern Utah Railway, managed by oldest brother Arthur A., built a railroad to haul coal from the Independent Coal and Coke property, and by September four or five carloads of Kenilworth coal daily rumbled off to Nevada, while other carloads went to surrounding towns.²³

The Sweets soon sold their first mine and began work in the undeveloped southwestern part of Carbon County, about 26 miles from Castle Gate. In financing this new venture, named Hiawatha, they received outside help, described by Arthur as, "A party of eastern investors along with a coal expert from Chicago. . . ."²⁴ The wealth of this new coal district, on the Black Hawk vein, must have impressed the eastern capitalists, for work commenced almost at once. The Sweets utilized their railroad company, the Southern Utah Railway, to develop these mines. They extended the road southwestward, completing construction in December 1908. Concurrently, they hired miners who drove the first portal, and created a new company, Consolidated Fuel, to manage their new coal mines.

Moroni Heiner followed the Sweets on to the Black Hawk vein. In 1909, Heiner's concern, the Castle

Valley Coal Company, opened a mine at Mohrland, south over the ridge from Hiawatha. As usual, building a railroad to the property was essential for commercial development. The Castle Valley Railroad, managed by the same individuals as the coal company, hooked into the Southern Utah Railway at Hiawatha and eventually became part of its system.

As mines grew, so did the labor force and the need for mine safety equipment. Broadening the progressive-era market network of Utah coal, operators looked to Europe, where the long tradition of coal mining encouraged the development of sophisticated technology. When the United States changed its tariff laws in 1909, Utah miners benefitted. As the State Coal Mine Inspector reported, "Since the tariff has been removed from the various life saving apparatus manufactured in foreign countries, an exhibition of the Draeger Oxygen apparatus has been given in the State, with, in our opinion, good results. . . ."²⁵ This safety equipment proved so effective, in fact, that Utah required its use the following year and found it highly reliable in mine rescue work for a long time thereafter.

In connection with the increasing concern for safety, a federal Department of Mine Rescue Work was established with its offices at Pittsburgh, at the University of Illinois, and at Rock Springs, Wyoming which also oversaw Utah.²⁶ A mine rescue car and team from Rock Springs trained selected Utah miners in correct safety procedures and the use of rescue apparatus.²⁷

Concurrently, Utah's coal mines underwent other dramatic changes. The rapid spurt in mine development quickly drained the local labor force, necessitating the recruitment of immigrants. Cultural and ethnic differences exacerbated the usual labor-capitalist conflict, and, in 1911, armed confrontation resulted. Kenilworth miners walked out because they wanted to hire their own check-weighman, who determined the weight of the coal, hence, their pay.

Subsequently events unfolded in two very different versions of the strike. First, according to the State Coal Mine Inspector:

A number of Greek, Austrian, and Italian miners . . . requested the mine superintendent to allow them to select a check-weighman, as they claimed they were not getting correct weights over the mine scales. This request was granted, but did not appease the lawless element, who refused to go to work and acted in a very boisterous and insulting manner, which resulted in fifteen of the ring-leaders being discharged and escorted out of camp. . . . [some] returned and incited about

seventy of the dissatisfied miners to arm themselves, shoot up the town, and thus compel the Independent Coal and Coke Company to reinstate those discharged and remedy other grievances which they claimed existed.²⁸

The shooting continued the next day, resulting in the deaths of a Greek miner and the Independent Coal and Coke Company watchman.

A surviving miner told a different version:

They had a new superintendent come from another mine, and they want to show, that they was robbing the miner out of their weight. See, we say a car used to weigh about 3 or 4 ton, . . . they only give you about 2 1/2, ton . . . at the most. . . . So [the miners] got together and [said] . . . we want one man out of our bunch to stay . . . with the company weighman, so they see we get anywhere near the right weight. . . . We don't strike. . . . We had everything settled down. About two days after, we see a car or two of gunmen come. We didn't know who they was, but they was gunmen. You see, the superintendent wanted to make big name for himself. Well, they had to put the gunmen [to work]. Some of us, about 25 . . . they laid us off. . . . But if I could talk [English] then like I do now, we would have had him [the superintendent] fired. Because the men didn't want no strike, all they wanted was all settled down. But that superintendent forced the strike [on] to the miners.²⁹

This incident had some surprising results. Although the local press blamed the Greeks primarily for the shooting and 60 were discharged from the mine, over 100 were reemployed.³⁰ Some of the "lawless element" discharged from Kenilworth found speedy employment at other nearby mines. Three of the Italians involved moved to Hiawatha, where they helped to open a new portal.³¹

Why were the so-called "lawless element" so quickly reemployed? Perhaps the miner's version had some truth to it; even more certainly, however, local mines were expanding rapidly and needed an ever-increasing labor supply. Only the amount of coal produced limited profits. As the State Coal Mine Inspector reported:

We close our fiscal year November 30, 1912, with the largest increase of coal and coke for any one year in the history of the State. The output of

coal increased 586,885 tons, or 23.46 percent. The coke production increased 134,988 tons, or 63.56 percent. [This increase resulted mainly from the demands of the equally expansive metal industry.] The Nevada smelters received 32,563 tons of coke against 335 tons in 1911. The Montana smelters increased their order from 86,714 tons to 135,865 tons. Idaho used 984 tons, while Utah increased her tonnage from 123,752 tons in 1911 to 176,426 tons in 1912.³²

Consequently, immigrant miners remained in Carbon County, where their descendants still make a distinctive ethnic mix in predominantly Mormon Utah.

Those already involved in Utah coal sought to capitalize on this growth. For example, in 1911, the Sweet family conducted a mine tour of Hiawatha for more than fifty businessmen, including the Utah State Attorney General, State Secretary of State, a state supreme court justice, officials of the Deseret National and Utah National Banks, and other luminaries.³³ Resultant interest in the area matured in 1912, when the Sweets sold Hiawatha to the United States Smelting, Refining and Mining Company, which exercised an earlier option to buy. As a result, "about fifty Salt Lake stockholders will realize from \$5,000 to \$10,000, and others considerably larger sums . . ."³⁴ The deal was rumored well in advance, as a local coal mine boss wrote to the State Coal Mine Inspector in February inquiring about a position with Hiawatha's "new management" under the misnamed "U.S. Copper Co."³⁵

Other interested firms also began to seek commercially viable coal properties. For example, George A. Storrs, an official of the Knight Investment Company, wrote to the State Coal Mine Inspector regarding the latest coal mining equipment.³⁶ "Uncle" Jesse Knight, a Utah capitalist with varied investments, bought into Carbon County coal to fuel his smelters, naming his 1912 mine after Storrs, who managed it. Knight and Storrs thus opened a rich coal area in central Carbon Country where previously only small-scale operations had held sway: Spring Canyon. The corporation there adopted the name of its locale: the Spring Canyon Coal Company.

During this boom, the Knight coal interests did not long operate in lonely isolation because other investors entered the same canyon. Leon F. Rains, writing for the Sweets' new Standard Coal and Coke Company, conducted a lengthy correspondence with the Utah State Coal Mine Inspector on behalf of himself and "several friends who would like to get a good coal property in Carbon or Emery Counties which could be

opened and operated at a fair cost."³⁷ At first he inquired into a privately owned piece of property near Castle Gate, and described his plans for "a closed Co-operation as there are three friends who will come in with me and can furnish all the necessary monies and prefer to handle it this way rather than Peddle Stock."³⁸ He later wrote,

I am figuring with some other parties in Salt Lake and also trying to get some Government lands [cheaper than privately owned areas] and I think that before long I will be able to get something at the right price and when I do I shall see that you are repaid for your kind favors.³⁹

The final letter in this series reported, "I wish to advise you that we are opening a coal property in Spring Canyon, Carbon County, Utah, just west of the Spring Canyon Coal Company's property, the development work having started on same last week."⁴⁰ The local newspaper had just reported a "New Coal Road to be Built" to the property of Standard Coal, organized under President F. A. Sweet.⁴¹ The Sweets and Rains had found a viable investment for the money gained from selling Hiawatha. At the same time, they headed the vanguard that initiated progressive-era developments in Utah coal.

Other Utah capitalists intensified this trend. According to the State Coal Mine Inspector, "the Ketchum Coal Company is endeavoring, by prospecting, to reach the Castle Gate seam on its property. . . ."⁴² The following year the Ketchum Coal Company president was identified as L. L. Legg, also president of the American Steel and Fuel Company (whose secretary was W. H. Sweet), which owned undeveloped lands near Hiawatha.⁴³ Other developments peppered the Castle Gate vicinity, including the Panther Mine of the Cameron Coal Company which was opened in 1912 by F. N. Cameron and sold the following year to Ogden capitalists including M. S. and Mariner Browning, famous for their rifle works.⁴⁴ By 1915, the Panther mine had been incorporated with those of Black Hawk, Hiawatha, and Mohrland under the ownership of the United States Smelting, Refining, and Mining Company and their newly created coal mining subsidiary, United States Fuel Company.⁴⁵ The progressive-era transformation from economic isolation to capitalist mainstream was complete. Furthermore, these corporate ties insured that the eastern Utah coal district would be increasingly affected by regional, national, and even international events.

Coal land development took place against a backdrop of outside disturbances and international upheaval. For example, the years 1913-14 marked one of the most violent coal mine strikes in American history in neighboring Colorado. It resulted in the infamous "Ludlow Massacre" of April 20, 1914 after which the charred bodies of two women and eleven children were found in the remains of the strikers' tent colony incinerated and fired upon by company gunmen and the National Guard. The Utah State Coal Mine Inspector reported, "A number of labor agitators . . . have visited some of the camps in Carbon County and have attempted to get an expression from the striking miners as to their willingness to join a labor movement to assist the striking miners in Colorado."⁴⁶ In a private letter to Utah's Governor he wrote:

A number of agitators representing the I.W.W.'s Western Federation and United Mine Workers, have been headed off and are making their headquarters at Helper and Price. These men are being closely watched by the mining and county authorities.⁴⁷

The union organizers failed in their bid for support, however. In some measure they were co-opted by the coal companies, who in 1914 voluntarily inaugurated a long desired two-week payday, rather than the usual monthly wage.⁴⁸ Additionally, miners found jobs scarcer due to the depression resulting from the beginning of World War I in Europe, when American overseas market networks were temporarily disrupted.

This war-induced depression, of particular significance in the metal industry, was widely felt in Utah. The State Coal Mine Inspector noted:

The average working days of the twenty largest coal mines of the State was 196 days for 1914 against 242 days for 1913. The main local factors responsible for this condition were the Bingham Copper mines and the Garfield smelters [property—directly or indirectly—of the giant American Smelting and Refining Company, "ASARCO"] who are large consumers of the coal and coke, reducing one-half of their working force, which resulted in their using but half the amount of coal as formerly, the railroads of Utah using approximately 100,000 tons less than last year.⁴⁹

This economic dislocation was temporary, however. The trend reversed itself when the United States entered the war in 1917. The price of copper rose to 27.2 cents a pound, more than twice what it had been

in 1914.⁵⁰ As the price began to rise, ASARCO's Utah holdings suddenly resumed operations in 1916.

But coal recovered less quickly, again due to outside influences. As the State Coal Mine Inspector reported:

The removal of the tariff from the Canadian and Australian coals has displaced considerable of our Utah coal in the coast cities and contiguous coast territory.⁵¹

The Utah coal industry--and its people--were becoming captives to outside forces.

Utah coal miners and producers alike responded to this diminished trade. Miners left the coal fields, seeking steadier employment elsewhere. Many of those of European origin returned to their homelands to fight, keeping alive ethnic and cultural ties with those earlier left behind.⁵² Company owners took steps to counteract the competition from Australia and Canada. First, they sent a letter to President Woodrow Wilson and other federal officials requesting that a deep-water port be built at San Francisco. With this improvement, they claimed, Utah coal could be loaded directly from its main carrier, the Union Pacific Railroad, to ships plying the West Coast.⁵³ No response was recorded. Almost simultaneously, Carbon County's nine leading coal companies patriotically (and practically) invited the federal government to use Utah coal for the Navy's Pacific Fleet.⁵⁴ The following year, 50 tons of Hiawatha coal were received by a Navy warship at San Diego,⁵⁵ in an attempt to expand the Utah market through the same kind of international influences that had earlier constricted it.

Some owners sought other solutions to the economic uncertainties of World War I. One of the Utah coal companies, Consolidated Fuel, instituted a system of cooperative buying to reduce expenditures.⁵⁶ In 1915 the local newspaper announced the consolidation of "all the independent coal producers in the state" under the new United States Fuel Company--a claim, which, while exaggerated, indicated a trend.⁵⁷ This action was contested in 1916 by minority stockholders in one of the affected companies: otherwise, opposition was muted.⁵⁸ The Ketchum Coal Company was reorganized, bringing some of the Eccles family members (presumably with attendant capital) to the Board of Directors. They reopened the Ketchum mine in 1916, when an unexpected coal boom occurred.⁵⁹

War-driven demand for Utah coal increased sharply in the fall of 1916, resulting in a concurrent demand for more miners. Although this additional work force

might have brought the mines up to full capacity, a shortage of railroad cars to haul the coal slowed output. It also diminished the miners' pay as they had to work partial shifts. Disgruntled, many of those newly recruited left their jobs, while those remaining demanded increased wages. An amicable settlement with three major companies resulted in a pay raise for almost all the coal miners in the state.⁶⁰ To protect their profits, several of the companies raised their price of coal to the dealer 60 cents per ton.⁶¹ The entire coal industry was now responding to outside demand.

Not only did the number and intensity of local effects increase, but the geographical size of Utah's market network ballooned during the Great War. As the president of one of Carbon County's companies described the market situation in 1917:

. . . factories have multiplied, particularly sugar factories--five new factories having been built during 1916 and four under construction for 1917. Each of these will require the neighborhood of 10,000 tons of coal annually.

There has been practically no coal received on the Pacific coast from Australia, New Zealand, China or Japan for over a year. The amount of coal from British Columbia has been greatly reduced by an act of the British government and the high price of coal on the Atlantic seaboard has prevented any coal moving through the Panama Canal to the Pacific coast.

The high price of oil has made it necessary for a great many oil users to return to the use of coal. . . .⁶²

A coal shortage developed throughout the West, and Idaho dealers offered "to pay cash and to contract for 10,000 tons of coal at any reasonable price up to \$3.50 a ton. . . ." This price held in spite of the fact that Utah coal was normally selling for \$2.40 a ton within Utah and \$3.00 a ton outside the state. However, coal operators declined Idaho's offer because railroad car availability was unpredictable, raising the possibility that they might not be able to deliver their product. This situation proved intolerable to the coal companies, so in 1917 they filed suit against the railroads with the Interstate Commerce Commission demanding \$423,349 in damages for the losses incurred by the "car famine" in the winter of 1916-17.⁶³

In spite of the car shortage, by the end of 1917 the *Salt Lake Mining Review* could report that almost all

Carbon County mines were expanding.⁶⁴ An analysis of "The Coal Industry of Utah in 1917," explained the reason:

While it is true that during the year the price of coal has been raised, the last raise being fixed by the Federal Government, it is also true that wages have been greatly increased, the last increase having also been fixed by the Government.

The companies' profits were preserved by an increase in the cost of slack as opposed to lump or nut coal, used for home heating. This increase was considered an "equitable adjustment [as] . . . slack coal is used by sugar companies, smelters, apartment houses, hotels, etc., thus putting the burden on people who can better afford to pay it."⁶⁵

With the advent of government supervision, coal company expansions came to a halt for a time. Developers who had been jockeying for control throughout the previous dozen years took their seats in 1918 on the board of the newly created Utah Coal Producers Association. Their status, a mirror of their success, revealed the new configuration in Utah coal. When independent producers first entered Utah coal fields in 1906, the D&RGW Railroad held a virtual monopoly. By 1918, their company, Utah Fuel, was not even represented on the new board, designed to simplify coal transactions with the federal government. Instead, its members included: E. S. Rolapp, President (manager of Cameron Coal Company); F. M. Cameron, vice president (original owner of Cameron Coal, then vice president of Liberty Fuel Company, opened in 1918); C. M. Strevell, secretary-treasurer (long-time official of the Independent Coal and Coke Company mines at Kenilworth); board member Moroni Heiner (once president of Castle Valley Coal Company at Mohrland, then vice president of United States Fuel which acquired his property); and board member F. A. Sweet (who opened Kenilworth, Hiawatha, and Standard), the patriarch of them all.⁶⁶ In 1923, a slightly different set of board members was indicted for price fixing as an illegal combination in restraint of trade.⁶⁷ The old "independents" had become the new "trust."

This outcome reflected the national wartime trend toward consolidation. As historian Gabriel Kolko noted, "It was during the war that effective working oligopoly and price and market agreements became operative in the dominant sectors of the American economy."⁶⁸ Certainly this process also dominated in eastern Utah coal.

Thus, by the end of the Progressive Era, the devel-

opment of Utah's major coal fields was complete and very much in the national image. Although some nascent attempts at local development had been realized--such as Pratt's Sowbelly Canyon mine--a regional railroad had pioneered commercial coal mining. With the advent of federal progressive-era trust-busting, commercial-sized independents had entered the field. The largest mines had introduced varied outside influences, from European safety equipment to foreign miners to international market systems. In a symbiotic relationship, these introductions fostered further mining development, until the transformation in Utah coal was complete. Like increasingly industrialized America, by the end of the Progressive Era Utah's coal district was inextricably tied to the outside world and to its vicissitudes. Any shadow of Mormon-inspired "community cooperation" was erased by the area's incorporation into the American capitalistic mainstream.

NOTES

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4. Arrington, *Great Basin Kingdom*, 276.
5. Ellis Clarke, Jr. to W.J. Palmer, 11 October 1881, MS513, Denver and Rio Grande Collection, Box 51, Folder 865, Colorado Historical Society, Denver, Colorado.
6. Nancy J. Taniguchi, *Necessary Fraud: Defective Law, Monopoly, and Utah Coal*. Norman, Okla: University of Oklahoma Press, forthcoming 1996.
7. Arrington, *Changing Economic Structure*, 27.
8. Teachers, Pupils and Patrons of Carbon District, "A Brief History of Carbon County," mimeographed history prepared by Carbon County (Utah) School District, 1930, n.p., 16.
9. Thomas A. Rickard, *A History of American Mining*. N.Y.: McGraw-Hill Book Co., 1932, 122.
10. Teancum Pratt Diary, family collection, Ogden, Utah, entries for 14 February 1895 and 16 April 1899.
11. "Carbon County Coal for Montana," (Price) *Eastern Utah Advocate*, 14 July 1904. "Of a More or Less Personal Nature," *E. Utah Advocate*, 7 March 1907 *State Coal Mine Inspector's Report* 1907, 19.
12. Helmut Hans Doelling, *Central Utah Coal Fields: Utah Geological and Mineralogical Survey Monograph Series No. 3*. Salt Lake City: Univ. of Utah, 1972, 546; U.S., Department of the Interior, Bureau of Mines, *Mineral Yearbook*, 1977. Washington, D.C.: U.S. GPO, 118.
13. Arrington, *Changing Economic Structure*, 27.
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17. Rolla West, interview, Price, Utah, 29 March 1979.
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20. J.E. Pettit to E.W. Parker, 15 January 1908, Utah State Coal Mine Inspector's correspondence, Utah State Archives, Salt Lake City, Utah.
 21. H.S. Alden to Gomer Thomas, 24 January 1908, Utah State Coal Mine Inspector's correspondence.
 22. "Aberdeen Mine Now Sold," *Eastern Utah Advocate*, 27 December 1906; "Curtis Tells What His Company is Now Doing," *Eastern Utah Advocate*, 7 March 1907.
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 24. A.A. Sweet to John Pettit, 1 July 1908, Coal Mine Inspector's Corresp.
 25. *St. Coal Mine Inspect. Rep't.*, 1909, 7.
 26. *Ibid.*, 1910, 72.
 27. *Ibid.*
 28. *Ibid.*, 1911, 6.
 29. Peter Aiello, private interview with Nancy Taniguchi, Price, Utah, 23 November 1979.
 30. Allan Kent Powell, *The Next Time We Strike: Labor in Utah's Coal Fields, 1900-1933*. Logan, Ut.: Utah State Univ. Press, 1985, 91-93.
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 39. *Ibid.*, 14 June 1912.
 40. *Ibid.*, 1 August 1913.
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 46. *Ibid.*, 1913, 8.
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 49. *Ibid.*, 101.
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 51. *St. Coal Mine Inspect. Rep't.*, 1914, 101.
 52. *Ibid.*, 1915, 5.
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