Journeys through the Region & Interpretive Themes

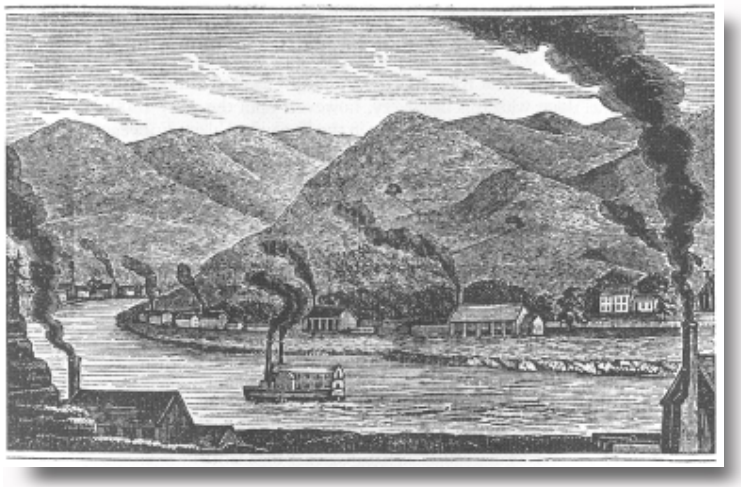
West Virginia coal has national significance in that it contributed to the industrialization of the United States, especially to the expansion and consolidation of manufacturing industries and to the growth of large cities that characterized the period between the Civil War and the Great Depression of the 1930s. The coal production of the Mountain State did not become a major factor nationally until after 1880, when the state contributed less than five percent of national coal production. Subsequently, however, West Virginia coal production grew rapidly. Mine operators from the state shipped their product to the "River Trade"—serving Pittsburgh, Wheeling, Cincinnati and other manufacturing cities of the Ohio and Mississippi valleys; the "Lake Trade," wherein coal was shipped by rail to Great Lakes ports for distribution to industrial cities throughout the upper Midwest; and, above all, the "Seaboard Trade," embracing the cities and industries of the Mid-Atlantic and New England states, which West Virginia coal reached via rail connections to the ports of Chesapeake Bay.

Located in the heart of Appalachia, the coal heritage region is among the most rugged and isolated places in the eastern United States.

Bituminous coal from West Virginia had specific attributes that made it particularly valuable for certain uses. The coalfields of southern West Virginia produced "semi-bituminous coal," which offered the highest ratio of thermal energy to weight of any fuel except for the anthracite coal found in eastern Pennsylvania. This made "smokeless" coal from the New River, Winding Gulf and Pocahontas coalfields of Fayette, Raleigh, Wyoming, Mercer and McDowell counties especially valued as a marine fuel and was one of the factors that encouraged the rise of Norfolk, Newport News and other Hampton Roads cities as naval and shipbuilding centers. Coal from the mines of Boone, Logan, Mingo and McDowell counties, though containing higher proportions of the gases that produce smoke, was ideal coking coal, which meant that as steel replaced iron after 1900 as the nation's leading primary metals industry, coke from southern West Virginia aided in the expansion of steel making westward from the upper Ohio valley to Chicago and other centers of the industrial Midwest. Thanks to these expanding markets, mining and population expanded rapidly after 1890 in the territory now embraced by the National Coal Heritage Area. West Virginia surpassed Pennsylvania as the nation's leading coal producing state in 1927, with 145,000,000 tons, or 28 percent of national production. Some seventeen- percent of the coal produced in the state at this time came from the mines of southern West Virginia.

1.1 Physical Characteristics and Key Resources

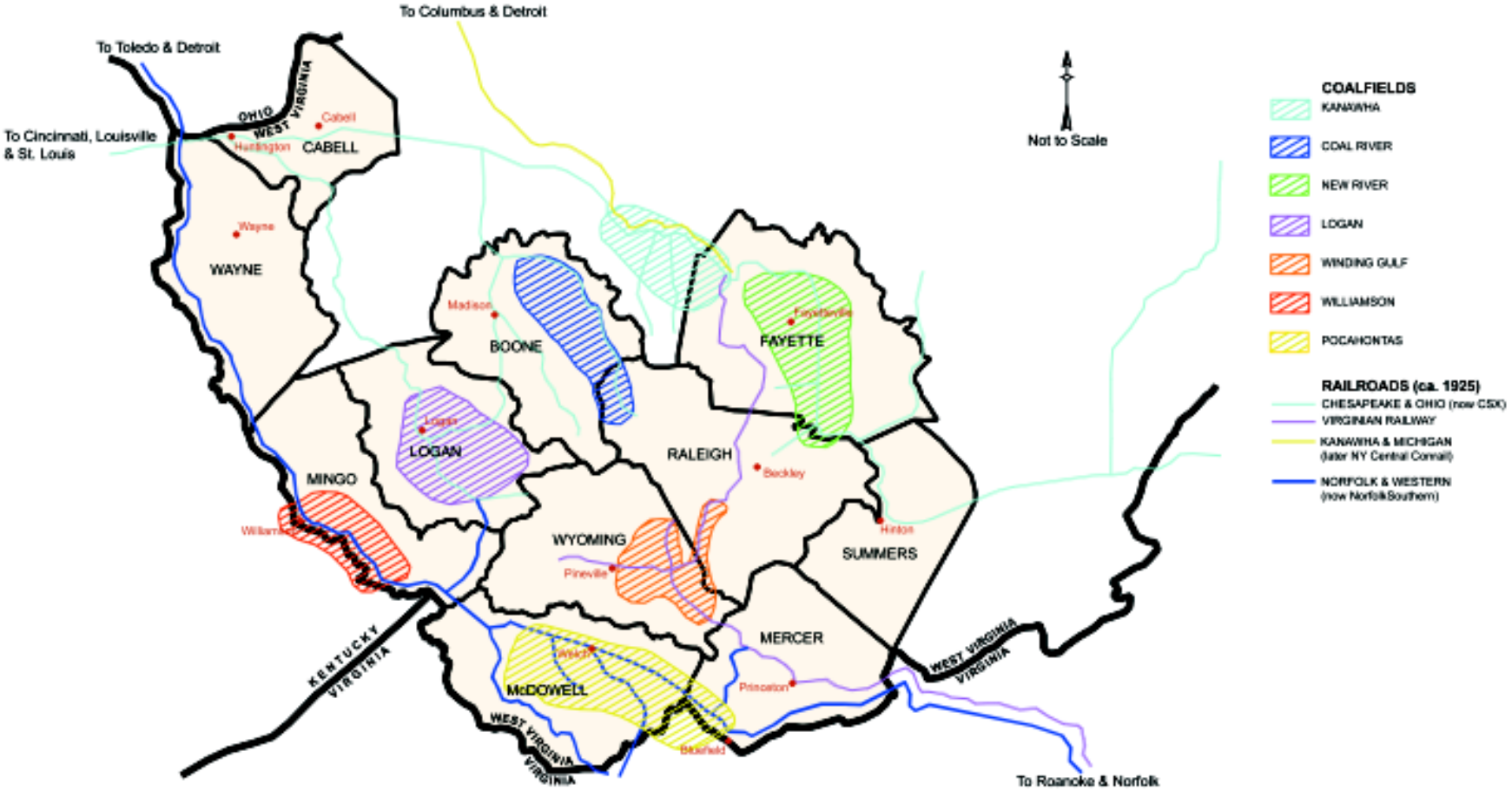
Experts delineate fourteen different coalfields in West Virginia. Of these, six—the Kanawha, New River, Pocahontas-Tug Fork, Logan, Williamson, and Winding Gulf— are wholly or partially located in National Coal Heritage Area counties. Geological history accounts for the different steam-raising and coke-making properties that led producers to specialize in certain markets. It also accounted for the stratigraphy of the region with its characteristic horizontal deposits of coal lying in "seams" of varying thickness sandwiched between layers of sandstone, slate and other sedimentary materials. Most southern West Virginia coal was deposited during the Carboniferous era of geological time (270-350 million years ago). During the geological ages that followed, running water went to work on the land's surface, carving the Allegheny Plateau into its characteristic pattern of steep-walled valleys drained by the "dendritic" (tree-like) watersheds of the Tug Fork, Guyandotte, Coal and lower New rivers. The "trellis-like" watershed pattern of broad valleys and parallel ridges typical of eastern Appalachia facilitated the approach of railroads to the coalfields via the Greenbrier, Bluestone and East River valleys but coal was found here only on the flanks of the mountains that define the Allegheny Front in this region. Thus the earliest mines of the Pocahontas field, those around Bramwell, West Virginia and Pocahontas, Virginia, were opened on the southeast face of Flat Top Mountain, but the subsequent growth of this field was concentrated in the valleys of Elkhorn Creek and the Tug Fork on the mountain's northwestern slope.



Large-scale coal mining first supported saltworks in the Kanawha Valley. SWV

The terrain of southern West Virginia paradoxically both encouraged and retarded the coal industry's development. The exposure of coal outcroppings on valley hillsides made it relatively cheap and easy to open a drift mine—basically a self-draining tunnel leading into the seam—instead of the costlier shaft mines that were required in the coalfields of the Midwest. At the same time deeply cut valleys and labyrinthine stream patterns discouraged agricultural settlement in this region and led to land speculation that shingled the region with overlapping claims and ultimately led to the control of vast tracts of coal-bearing land by absentee owners based in eastern and midwestern cities. The same factors inhibited transportation development until railroads finally penetrated southern West Virginia after 1873. Thus apart from the sliver of NCHA territory that lies along navigable sections of the Kanawha and Coal rivers, coal could not be shipped from the region until the Chesapeake & Ohio (1873), Norfolk & Western (1881) and Virginian (1907) railroads built their lines in southern West Virginia. This meant that the pioneer coal operators there were often self-made men, operating on very little capital, and at the same time entirely dependent upon the absentee land companies that leased their property and the railroads that carried their output to markets. Their direct costs of mining were relatively low, yet unlike their competitors in the Midwest, they had no choice but to build company towns and operate company stores in order to attract and keep workers during boom periods. This context helps to explain why southern West Virginia coal operators resisted so fiercely when labor unions threatened to add another factor outside of the operators' control to the challenge of managing their properties, and it also explains why so many of them were tempted to shave the real wages of miners in order to pad the profits operators earned from the rental of company houses and the prices at company stores. The labor struggles known as the West Virginia Mine Wars were in essence struggles for control over the captive communities that nature forced the industry to scatter through the West Virginia hills.

Communities, mine works, railroads and rivers share valley floors between steep hillsides. NA



Coalfields and Mainline Railroads of the NCHA

1.2 Interpretive Themes

Coalfields history and culture contains all of the elements of American economic and social history – industrial might, labor struggles, distinctive communities and ethnic diversity. The coalfields story is a uniquely American story: the opening of a rugged wilderness to develop a natural resource that would transform rural America into an industrial power. Remarkably, much of this story can still be told first hand in the distinctive communities that produced a culture of national importance and through the voices and memories of the people. Strong themes tell this story in a fascinating and memorable manner.

1.2.1 The Coal Business

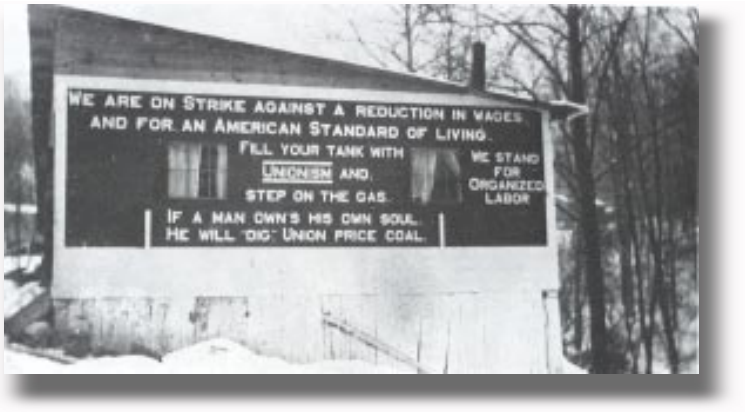
Coal was the source of steam power during the Iron Age. In its processed form of coke, coal was an essential ingredient of steel, which by 1900 was replacing iron in construction and railroad building and would be vital in the growth of new 20th century industries such as automobiles and petroleum pipelines. Coal and coke were also raw materials also in industrial chemistry, which became an important industry in West Virginia during the early 20th century. It is not surprising thus that many West Virginia leaders in 1900 thought that the state's abundant supplies of coal guaranteed the Mountain State a prosperous future.

Mantrip entering mine, Gary, McDowell County. NA

It is possible with hindsight to see the flaws in such predictions, however. Notwithstanding its importance, the bituminous coal industry did not keep pace with overall national economic growth after 1910. Alternative fuels, more efficient boilers and steam engines, global market forces and campaigns against air pollution all combined to restrict the coal market after 1922 to less than sixty percent of what the nation's mines were capable of producing. Favorable geology and the high quality of southern West Virginia coal led mine owners to continue to expand production regardless of fluctuations in demand, but the industry's inelastic demand curve meant that lower prices did not lead to more consumption, just to lower profits as coal operators scrambled to hold their own in a general atmosphere of decline. Producers sought to offset lower profits with lower wages; the fledgling United Mine Workers of America sought to defend wage levels while working politically for federal intervention into the industry's stormy labor relations. The result was an almost continuous crisis in the coalfields after 1910, interrupted only booms during and following World Wars I and II and during the "energy crisis" years of the 1970s.

1.2.2 Working in Coal

Coal mining is a distinctive branch of a distinctive industry. While it shares many practices with the mining of other materials, its occupational culture is unique to coal. Like most forms of culture, it was learned informally as miners came into the mines as children and young adults working alongside older family members such as fathers, uncles, and older brothers. The miners' traditions that are best known to the public stem from the long struggle for unionization of the mines, a struggle that in southern West Virginia extended from the 1890s into the 1940s. Whereas operators looked at their industry from the perspective of the coal market, miners looked at it from the perspective of the company town. Eighty percent of West Virginia miners lived in such towns in the 1920s; the proportion was even higher in the southern part of the state. This meant that mine workers and owners confronted each other not only as workers and employers but as tenants vs. landlords, store customers vs. wholesalers, local residents vs. absentee rulers, citizens vs. operator-controlled police, churches, schools, even a private money of account known as "scrip." After 1890, the United Mine Workers of America gave voice to the many grievances that accumulated from these circumstances. Advancing southward intermittently for twenty years, the UMWA's organizing campaign was stymied by intense resistance in southern West Virginia after 1912. The resulting four "mine wars" (1912-1927) generated some of the most memorable episodes in American labor history, including the Matewan Massacre (1920), the assassination of Sid Hatfield (1921), and the subsequent March on Logan that culminated in the Battle of Blair Mountain (August 30-September 4, 1921). In national history, southern West Virginia's coal heritage is inextricably bound up with these events.



Pro-Union sign, southern West Virginia. WVU

1.2.3 The Company Town

Company towns were more than simply arenas of conflict. The fact that the coal industry mushroomed in an area that had been thinly settled by farmers and grazers meant that such towns had to be built to attract and house workers. While they were captive communities, in the sense that residents lacked the privacy, rights and diverse job opportunities that workers in urban settings enjoyed, they also offered amenities, such as electricity and a broad array of consumer goods, that were hard to come by in rural West Virginia before the 1930s. A number of operators built "model" towns, responding to the doctrine of welfare capitalism, an early 20th century movement that advocated providing good housing and recreational facilities as a means of countering the appeals of union organizers. Company stores passed along to consumers the higher wholesaling costs that distribution to a large number of venues scattered over a wide area necessarily entailed, but they also provided wider choices and easier credit than were generally available to rural consumers elsewhere.

Gary, McDowell County. ERCA

Women in company towns had few employment opportunities, but they were also spared the isolation that afflicted many farm women. Men and children benefited from enhanced recreational facilities, such as the baseball fields found in most towns. While native white, African American and immigrant ethnic groups were generally housed separately in distinct clusters, the opportunities for interaction in town life and the unsegregated character of underground working conditions contributed to a richer cultural diversity than any of the three groups had encountered elsewhere. Even shared conditions of hardship and danger in the mines contributed to a sense of community solidarity that residents often later recalled fondly.

1.2.4 Mining Technology

When John L. Lewis had chandeliers made of miners' pick axes and shovels installed in the union's new headquarters in Washington DC, he was enshrining basic hand tools that went back to antiquity, whereas in fact Lewis's era of leadership in the coal industry encompassed important technological departures from these ancient tools. First came the mechanization of undercutting tools, powered either by electricity or compressed air, often accompanied by the application of electricity to coal haulage underground and at the tipple where coal was sorted and cleaned for rail shipment. During the 1920s, the development of mechanical loaders allowed haulage to keep pace with the increased pace of extraction at the coal face. Mechanical roof bolters made possible safer working conditions and broader passageways to accommodate maneuvering the new machines. Soon after World War II came the "continuous miner," a complex machine that clawed coal from the face and loaded it mechanically onto conveyor belts that displaced or supplemented haulage by mine cars. The pace at which individual companies and mines adopted these inventions and innovations varied but by the 1950s it can be said that the industry in general was mechanized. During the 1970s, another underground technology was imported from Europe: longwall mining, combining roof support, extraction, and haulage in a single high-technology apparatus. Surface mining emerged as an alternative to underground mining during the 1940s and has expanded steadily, usually driven by the increased size and power of diesel-powered equipment such as drag lines, earth movers and large trucks. Each of these technologies led to changes in the organization of work, which in turn led to conflict between miners and employers over wage rates and working conditions. Mechanization also increased the amount of dust generated by mining, raising the incidence of health hazards such as pneumoconiosis and silicosis.

Early continuous miner in action. WVU

1.2.5 Crisis and Renewal

In a series of sometimes bitter, sometimes cooperative negotiations between 1946 and 1950, the UMWA and the coal industry came to a series of agreements that had drastic implications for coalfield communities. In return for accepting mechanization and the resulting attrition of jobs, the union won industry acceptance of high wage rates and a welfare fund that supposedly guaranteed comfortable retirements and good medical care for both miners and retirees. At the same time, the companies began a massive sell-off of coal town property, which allowed employed miners to acquire their own homes. Neither party addressed the needs of young people coming of age in the coalfields, since the numbers of new jobs were expected to decline gradually but steadily. In the actual event, however, the decline came suddenly, with a far steeper fall-off in employment than anyone had envisioned. The result was a "great migration" from the coalfields, led by African Americans, who migrated in numbers three times greater proportionately than did whites, and by young people of working age of all ethnicities. The Appalachian coalfields comprised the first U.S. region to confront this phenomenon of "deindustrialization." During the 1970s, coal mining entered upon another boom and there was widespread anticipation of renewed population growth in southern West Virginia. This did not materialize, however. While coal production continued to grow during the 1980s and '90s, coal employment did not. Although production numbers approached the 1927 record in 1989, the number of miners employed fell below 20,000, thanks to technological change above and below ground and to the increasing proportion of West Virginia coal produced by surface mining.

Unlike "rust-belt" industrial districts and the downtown cores of older industrial cities, the coalfields have never benefited much from a countermovement—"gentrification"— that has converted obsolete structures and districts to the uses of service- and information-oriented industries and of consumers who search for touches of "authenticity" amid the standardized offerings of a global economy. Tourism is one of the service industries that gentrification has served, and the National Coal Heritage Area represents an attempt to capture some of its benefits for southern West Virginia.

Ghost town of Giatto, Mercer County. SWV

1.3 Relating Interpretive Themes to Facilities and Sites

Structures, stories and sites will give life to the five major interpretive themes. Interpretive themes established for destination centers are described in the accompanying table. Site specific themes will be communicated to visitors at each destination center or site within the larger experience zones. The plan will describe what is being communicated to visitors at each site and how is it being communicated. Sites will tell a part of the story that is authentic to their history and that also contributes to a more informed understanding of the region. Interpretive planning will describe how physical artifacts are accessed and understood, what is the proper role for exhibits and displays and which media work best in explaining the story. The availability of resources and materials will often drive the choice of media. Media should relate to themes to be interpreted at each site and may be as diverse as interpreting physical artifacts such as company towns, understanding themes through oral histories and photography or touring mine sites accompanied by miners who have working knowledge of specific or similar sites.

Russian Orthodox Church, McDowell County.