

VIRGINIA COAL

• AN ABRIDGED HISTORY •

**AND COMPLETE DATA MANUAL OF VIRGINIA COAL
PRODUCTION/CONSUMPTION FROM 1748 TO 1988**

VIRGINIA CENTER FOR COAL & ENERGY RESEARCH

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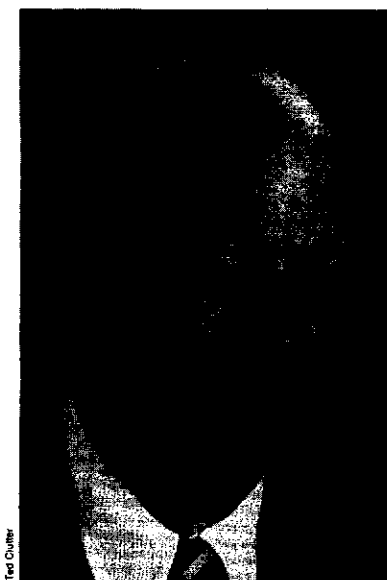
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Virginia Polytechnic Institute & State University
617 North Main Street, Blacksburg, VA 24060**

Cover: Southwest Virginia miners at the turn of the century, wearing open-flame headlamps and using hand tools. At top left, mules provided power to move coal cars; often they lived their entire lives underground. Below, a miner turns a long-hand bit, while a companion tamps explosives into holes drilled across the mine face. Another undercuts the face, assuring that the coal would "ball" during the blast. Coal was loaded by shovel and sheer force of muscle. Thin-seamed coal required miners to reach some work areas on low-lying "scooters." At far right, a miner loads powder, while at bottom center, inspectors estimate methane levels by checking the condition of a caged canary.

The cover rendition was reproduced from a historical mural painted by Ellen Elmes for the entrance foyer of Charles R. King Hall at Southwest Virginia Community College (Richlands). *Cover Design by Ted Clutter.*

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Prior to his retirement in 1988, Walter R. Hibbard, Jr. was University Distinguished Professor of Engineering at Virginia Polytechnic Institute & State University (Blacksburg); Director of the Virginia Center for Coal & Energy Research (VCCER); a member of the Board of Directors of the Norton Co. (Worcester, MA), and Editor-in-Chief of the academic journal, *Materials and Society*. He is a registered professional engineer in Virginia, Ohio, and Connecticut.

Hibbard has authored more than 125 technical and economic policy reports related to materials, minerals, energy, and the environment. During and following his career at Virginia Tech and VCCER, his specialty has been the U.S. and Virginia coal industries. In 1987, Governor Gerald Baliles awarded Hibbard a commendation for his contributions to the Commonwealth of Virginia.

A degree in chemistry at Wesleyan started Hibbard's career, followed by a Doctorate in Engineering at Yale. After WWII service as a reserve officer in the U.S. Navy Bureau of Ships, Hibbard taught metallurgy at Yale's School of Engineering, and was a Fellow of Davenport College. Later, while working as Manager of the General Electric Metallurgy and Ceramics Department, General Electric Research Laboratory (Schenectady, NY), Hibbard served as Adjunct Professor of Metallurgy at Rensselaer Polytechnic Institute.

Heeding a call by President Lyndon Johnson, Hibbard served as Director of the U.S. Bureau of Mines, beginning in 1965. Leaving that post in 1968, he was appointed Vice President for Research and Development, and later for Technical Services at Owens-Corning Fiberglass Corp. (Toledo, OH). In 1974, he served as Deputy Director of Fossil Fuels at the U.S. Energy Research Administration.

Hibbard is a member of the National Academy of Engineering, and has served on its Council and Committee on Public Engineering Policy. He has chaired both the Materials Advisory Board and Building Research Advisory Board of the National Research Council; and served on the National Academy of Sciences' Committee on the Survey of Materials Science and Engineering (COSMAT).

Fellowships include the American Academy of Arts and Sciences; the American Ceramic Society; the American Society for Metals; and the Metallurgical Society of the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME). Hibbard was president of AIME in 1967 and has received their James Douglas Gold Medal, Rossiter W. Raymond Award, and Mineral Economic Award. In addition, he has received honorary degrees from Michigan Technical University and from the Montana College of Mineral Science & Technology; the Wesleyan University Distinguished Alumnus Award; and the Yale Engineering Association Award for the Advancement of Science and Engineering.

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Virginia's Coalfields: Geography and Discovery

Today, Virginia is the nation's seventh largest coal-producing state. Even though the Commonwealth's coalfields are smaller in area than those of its competitive neighbors (West Virginia and Kentucky), three distinct advantages during the initial industrial growth of the United States assured Virginia's place as a top-ranking coal producer.

First was the development of steam-powered ship and rail transport during the mid-19th century, both fueled in part from the coal-bearing regions in the eastern and central portions of the state. Second was the late-19th century industrial revolution, fed with Southwest Virginia coking coal. Third was the entrepreneurial spirit of the state's coal companies during the entire period. Their construction of small "feeder" lines to connect mining operations with major railroads was instrumental in the development of Virginia's modern coal industry.

Most important, however, was Nature's gift of abundant, premium-quality coal deposits.

Virginia's Coalfield Regions

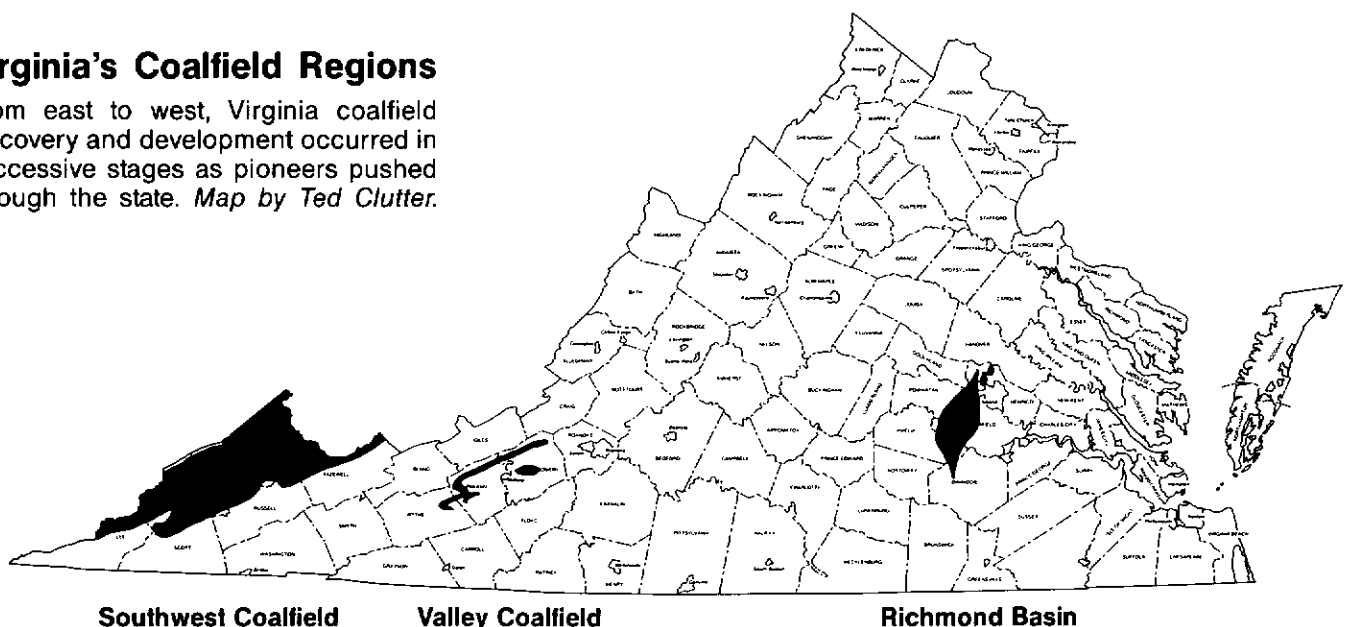
The Piedmont Region includes the Richmond Coalfield Basin in east-central Virginia, forming a strip some five to ten miles wide that surrounds a 150-square mile oval in Goochland, Henrico, Powhatan, Chesterfield, and Amelia counties. The Virginia Division of Geological Resources (VGS) estimates resources at one billion tons of Triassic Age bituminous coal.

The Valley Region in west-central Virginia includes 100 square miles in Montgomery and Pulaski counties. VGS estimates regional resources at one billion tons of Mississippian Age semi-anthracite coal.

The Southwest Coal Region is the heart of the modern Virginia coal industry. Rich coal seams underlie 1,550 square miles in seven counties, hugging the West Virginia and Kentucky borders for 110 miles. Beginning in the east with a narrow strip in Tazewell County, the coalfield widens to

Virginia's Coalfield Regions

From east to west, Virginia coalfield discovery and development occurred in successive stages as pioneers pushed through the state. Map by Ted Clutter.



about 30 miles as it extends westward through Buchanan, Dickenson, and Wise counties, touching the northern portions of Russell and Scott counties before terminating in a 3-mile wedge in Lee County. Estimated resources are 30 billion tons of Pennsylvanian Age bituminous coal.

With more than 90 percent of their land area covering coal seams, three Southwest Virginia counties depend almost exclusively on mining for their modern economic base: Buchanan, Dickenson, and Wise. In contrast, only 17 percent of Lee County contains coal, 15 percent of Tazewell, 14 percent of Russell, and 5 percent of Scott.

In 1984 the Virginia Division of Mines (Virginia Department of Mines, Minerals & Energy) estimated Southwest Virginia coal reserves at 9.75 billion tons.* If this figure is correct, and half are recoverable, Southwest Virginia coal reserves can support mining for another 100 years at current production rates (40 to 50 million tons annually). More recent calculations by the Virginia Division of Mineral Resources and the U.S. Geological Survey, however, indicate that the region's reserves may be far less than the 1984 estimate.

Coalfield Discoveries

According to legend, a French hunter first discovered coal in Virginia while pulling a tree from the bank of Upper Great Creek, near Manakin in present-day Goochland County. Colonel William Byrd visited the 1699 discovery site (14 miles west of Richmond) several times during the early 1700s. His diary notes commercial coal mining there by 1709.

Virginians moving westward toward the Cumberland Gap during the late-18th century discovered beds of "stone coal" (semi-anthracite) in the valley deposits of Montgomery and

Pulaski counties. Small-scale pit mining was reported in the former by 1790, and operations soon moved underground.

During the 18th century, Southwest Virginia was a frontier bordered on the west by a string of forts that protected settlers from Indian attack. Daniel Boone was a sometime-resident of forts at Blackmore, Castlewood, Russell, Glade Hollow, and Elk Garden.

In April 1750, Dr. Thomas Walker, Dr. Ambrose Powell, Joseph Martin, and John Tomlinson passed through present-day Tazewell, Buchanan, Dickenson, and Wise counties (then parts of Augusta County). A Shawnee Indian, Standing Turkey, showed them large coal outcrops in the area. Walker was the first to note Tazewell County's great Pocahontas coal deposits.

Additional coal discoveries followed. In 1751, Christopher Gist reported "blocks of coal" near Pound Gap (Wise County). On his 1756 return from a battle with the Shawnees near present-day Cincinnati, OH, Colonel William Preston reported coal lands near the Clinch and Sandy Rivers. Gazetteer Edward Martin recorded coal of "good quality" in Lee, Wise, Russell, and Scott counties in 1835. In 1873 Captain I.A. Welch reported that blacksmith Jordan Nelson used coal from a 13-foot outcrop that ringed the base of a mountain near Laurel Creek.

* In contrast to "resources," which represent the total amount of coal lying within a region, "reserves" represent the volume of coal that can conceivably be mined by current technologies — depending on the size, characteristics, and availability of the deposit. Reserve figures are subject to change with introductions of new mining technologies, and variations in ownership, regulation, and demand.

Transportation and Coal Industry Development

The first coal mines in each of Virginia's coalfields marked their beginnings in wilderness, without the commercial advantages afforded by good roads, population, and enterprise. Initial coal production was invariably limited by the range of horse-drawn wagon — large-scale mining and shipments of Virginia coal to distant markets could not occur until improved transportation links penetrated each of the Commonwealth's coal-bearing regions.

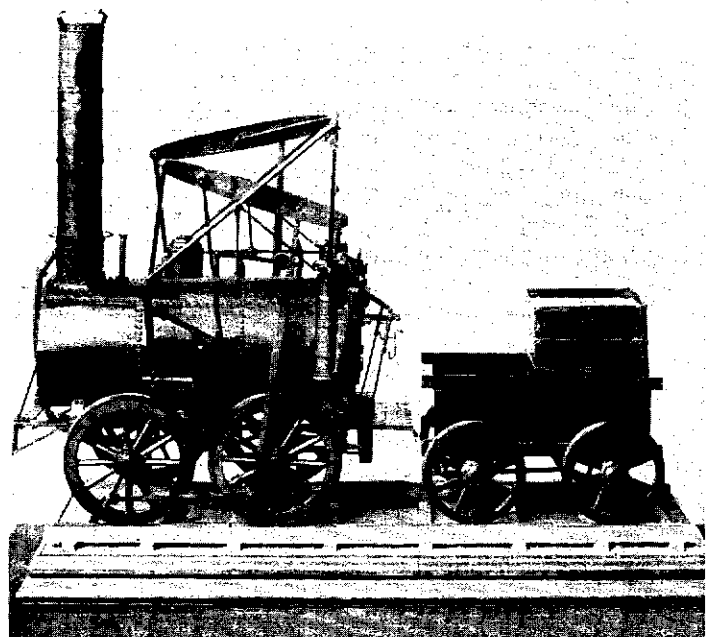
Richmond Basin Coalfield

During the early-18th century, laborers built the primitive Buckingham Road (1730) to carry coal by wagon from Basin mines to Richmond. The James River & Kanawha Canal (1795) and the Midlothian Turnpike (1802) improved this early system of coal transport. By 1820 the Tuckahoe Canal connected Basin coalfield operations with the James River. In 1831 the Chesterfield Railroad, a mule-powered tram with wooden rails, extended from mines near Midlothian to Manchester (across the James River from Richmond).

The invention of the steam-powered locomotive enabled Virginia's first coal mining ventures to flourish. In 1840 the Tuckahoe & James River Railroad (a branch from the Richmond, Fredericksburg & Potomac Railroad) reached the Deep Run Coal Pits northwest of Richmond. The Clover Hill Railroad (later the Brighthope) linked with the Richmond & Petersburg Railroad at Chester in 1841, carrying coal from the Clover Hill, Coalboro, and Winterpock mines. The Richmond & Danville Railroad (R&D) extended from Richmond to Midlothian and beyond by 1850, replacing the Chesterfield Railroad. The Powhatan & Farmville Railroad connected mines near Powhatan with the R&D at Moseley Junction.

The Valley Coalfield

The first rails to Virginia's Valley Coalfield were laid during 1856, when the Virginia & Tennessee Railroad (later the Norfolk & Western) reached the town of Pulaski on its way from Roanoke to Bristol. In 1879, the Altoona Coal & Iron Co. built nine miles of narrow-gauge track between its mines on Little Walker Mountain to the Bertha Zinc Works, Pulaski County's largest coal consumer.



By the 1830s, primitive steam locomotives like the model pictured above provided the power to move coal to market from the Richmond Basin. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*

The N&W built its New River Branch into the region in 1882, spurring greater coal production. After the railroad opened its Hampton Roads export pier (1885), Montgomery County mine output rose to 14,108 tons (1887). With the 1904 completion of the Virginia Anthracite Coal & Railroad between Blacksburg and N&W's main line near Christiansburg (Cambria), the county's annual coal output jumped to 21,628 tons.

In 1907 the Virginian Railway (VGN) connected Montgomery County with the company's export pier in Norfolk. Although the VGN carried only 300 tons of Montgomery County coal during 1914, the railroad increased its share to 103,734 tons by 1929, making it the major carrier for the Valley Coalfield.

Southwest Virginia Mining Expansion

Spurred by the need for locomotive fuel and by competition from the Chesapeake & Ohio Railroad's (C&O) line between Hampton Roads and West Virginia's Kanawha Coalfield (1873), the Norfolk & Western Railroad (N&W) was the first to exploit Southwest Virginia's high-grade coal deposits. By 1881, N&W had purchased rights-of-way to mines owned by the Southwest Virginia Improvement Co. (SVIC) in Tazewell County's Flat Top mining district. Two years later the railroad extended the New River Branch from its Radford depot to the famous Pocahontas Mine.

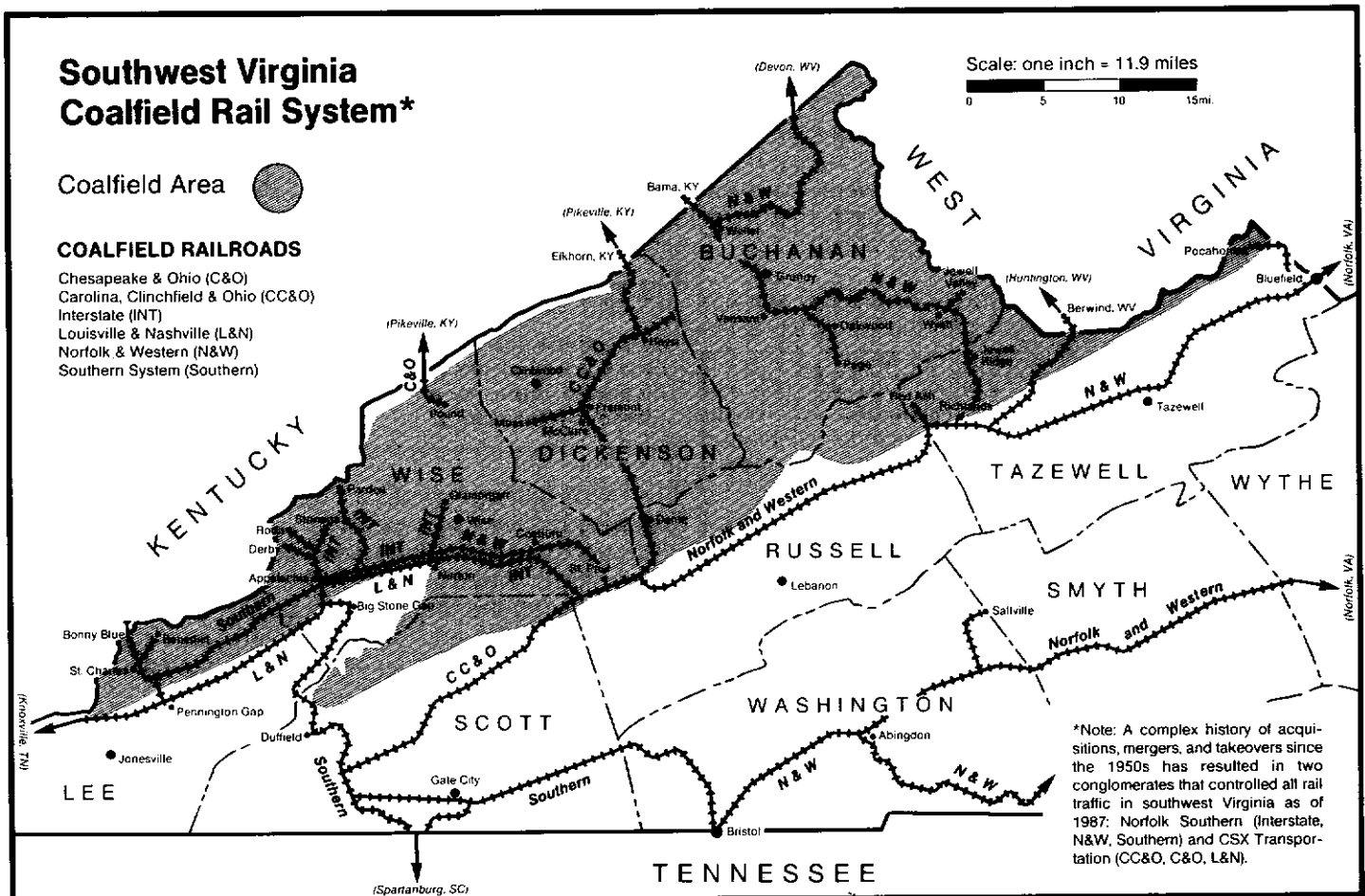
The Commonwealth's modern coal industry was inaugurated by N&W on St. Patrick's Day in 1883, when the first shipment of Pocahontas coal reached Norfolk from Southwest Virginia. With construction of coal piers at Hampton Roads, Virginia coal quickly found markets throughout the East and abroad.

Railroad influence on Southwest Virginia coalfield development is revealed by 19th-century production records. With rail connections to the Midwest and East Coast, two SVIC mines in Tazewell County alone produced 697,000 tons by 1892. Without rail links, coal production totals from neighboring counties during 1889 were a tiny fraction of that amount: Russell (402 tons), Lee (370 tons), Wise (188 tons), and Dickenson (85 tons).

Tazewell County's competitive edge was short-lived. In 1891, N&W completed its Clinch River Branch from the company's main line at Bluefield to Norton in Wise County. Norton was reached simultaneously from the west by the Louisville & Nashville Railroad (L&N). At about the same time, the Wise County town of Big Stone Gap became a terminal for the South Atlantic & Ohio Railroad (SA&O) on its route north from Bristol, Virginia.

With the arrival of railroads, Wise County coal production soared. By 1892, the county boasted 13 mines that produced 126,216 tons (compared with a meager 188 tons only three years earlier). With an 1897 production of 712,211 tons, Wise County surpassed Tazewell. Additional rail connections assured Wise County's dominance of Southwest Virginia coal production for another 40 years.

During 1901 the Virginia Coal & Iron Co. built the Interstate Railroad, connecting with the L&N at Norton and the N&W at Appalachia. Though the railroad claimed relatively few miles of track, its short "feeder" lines from Wise County mines near Glamorgan, Stonega, and Pardee to various railroads serving the region were vital to Southwest Virginia Coalfield development. In 1902, the four-mile Virginia & Kentucky Railroad connected Norton with the town of Wise, providing access to still more mines. The Chesapeake & Ohio (C&O) reached southward from Kentucky into Wise County by 1903.





The first Norfolk & Western locomotive to reach Tazewell County's famous Pocahontas Mine arrived in 1883. Subsequent shipments to Norfolk inaugurated the Southwest Virginia coal industry. *Eastern Regional Coal Archives/Craft Memorial Library (Bluefield, WV).*

The Clinch River Branch served Russell County by 1891, but because coal reserves were far from N&W's main line, mines were not developed there until the end of the century. Large coal shipments from Russell County began in 1902, after the Carolina, Clinchfield & Ohio (CC&O) reached northward from the N&W (at St. Paul) to new mines at Dante and Wilder.

Lee County mining districts were also too far from initial rail service for immediate development. The L&N paralleled the county's coalfields on its way to Tennessee by 1891, but coal shipments from the area didn't begin until 1907, after the Virginia & Southwestern Railroad (formerly SA&O) reached westward from Norton to mines beyond St. Charles.

Scott County rail service began when the SA&O extended its right-of-way northward from Bristol in 1891. The CC&O provided additional rail service by 1909. Difficult geological conditions in the Little Stoney Creek area, however, delayed Scott County coal mine development until 1917.

Dickenson County coal development couldn't begin until laborers connected the CC&O with the L&N at St. Paul in 1911, and extended tracks northward to the C&O at Elkhorn, Kentucky in 1915. Coal shipments began in 1917. Spur lines were built later to mines at Haysi (1931) and Moss (1942).

Of Southwest Virginia's seven coal-producing counties, Buchanan was the last to gain the benefits of rail transport and the opening of its rich coal reserves. Roads through the county were rough and often so steep that they could only be traveled on horseback. And though the Big Sandy & Cumberland Railway (BS&C) reached from Grundy northward to West Virginia by 1903, the narrow-gauge railway was built to carry lumber, not coal.

N&W bought the BS&C in 1923, but Buchanan County had to wait almost another decade for rail service that was sufficient to promote coal development. N&W rebuilt the BS&C railway to standard gauge in 1931, and the first large coal shipments (totaling 278,853 tons) left the county the following year. After N&W laid tracks to new mines at Vansant and Jewell Ridge in 1936, Buchanan coal production soared to 3,589,506 tons, surpassing Wise County.

Southwest Virginia Rail Consolidation

At the same time that their tracks were reaching into Southwest Virginia, railroad companies consolidated rights-of-way and built an extensive rail web throughout the eastern United States. This transport net was integral to the region's early coal marketing success. Virginia coal ultimately reached southern and southwest markets on the Southern and L&N; northern and northwest markets on the C&O and N&W; and eastern markets on the C&O and N&W.

Seven railroads served Southwest Virginia coal mines by 1935: N&W, L&N, Southern, CC&O, Interstate, C&O, and the Virginian. N&W acquired the Virginian in 1959, reducing the number of rail lines in the region to six. In the 1960s a complex series of mergers, takeovers, and acquisitions began among railroads within the region. Two large corporations controlled all Virginia coal traffic by 1984: Norfolk Southern Corp. (N&W, Interstate, and Southern) and CSX Transportation (C&O, CC&O, and L&N).

Production, Markets and Employment

Richmond Basin Coalfield

For 50 years after its discovery, Richmond Basin coal was used locally by blacksmiths, iron foundries, and for residential heating.

With shipments from the Port of Richmond to Philadelphia sometime around 1750, the Richmond Basin claimed the beginnings of the U.S. coal industry. Initially transported by wagon, measured in bushel baskets (25 per ton), and loaded on ships, Virginia coal reached consumers as far away as New York by 1758.

By 1835 the region exported 140,000 tons of coal, part of its all-time production high of 175,000 tons. According to an 1851 newspaper account in the *Richmond Whig and Public Advisor*, six coal mines operated in Chesterfield County, and four each in Goochland and Henrico counties. Richmond Basin coal production was 138,000 tons that year.

Though Richmond Basin mine operators received only 80 cents/ton for their hard-won product during the mid-1800s, the same coal fetched the exorbitant price of 25 cents/bushel, or \$6.26/ton by the time it reached distant consumers. That's equivalent to \$75/ton in today's economy, or nearly twice the current average delivered cost of U.S. coal!

The region's coal operators soon faced competition from higher quality coal marketed from mines in Maryland and Pennsylvania. The Civil War wrought severe damage to Richmond Basin coal mines and railroads, tumbling production to 40,000 tons. Despite efforts to modernize mining, the region's last recorded coal shipment occurred in 1924. The Richmond Basin Coalfield yielded an estimated nine million tons during its 176-year history; peak recorded employment was 801 miners in 1896.

The Valley Coalfield

Farmers, blacksmiths and small foundries were the first to use the excellent quality fuel mined from the Valley Coalfield in Montgomery and Pulaski counties. Surface diggings soon moved underground with drift and slope mines.

The U.S. Census reported only 2,497 tons of coal produced from 12 Montgomery County mines in 1880. Production grew rapidly with construction of N&W's New River Branch into the region in 1882, reaching 14,108 tons by 1887. With completion of the Virginia Anthracite Coal Railroad from Blacksburg to N&W's main line near Christiansburg (Cambria) in 1904, annual production jumped to 21,628 tons. The Virginian Railway, however, did the most to increase markets for Montgomery County mines, shipping more than 100,000 tons of coal annually to Norfolk by 1929.

Though N&W's New River Branch shipped limited quantities of Pulaski County coal after 1882, the Bertha Zinc Works was by far its major consumer. The smelter burned from 25,000 to 40,000 tons annually (from the Altoona Mine) between 1888 and 1911.

Regional iron ore deposits led to the establishment of several foundries in Pulaski County; these too were markets for local coal until the 1930s. Developed to commercial scale in the early 1920s, the Empire Mines on Cloyd Mountain were the county's largest, shipping coal on their narrow-gauge railroad to the town of Pulaski. Their failure in 1938 essentially ended the county's coal production.

Valley Coalfield Production: 1840-1988

County	First Shipment	Peak Year	Peak Tonnage	Total Shipped
Montgomery	1840	1943	202,000	4.4 mt
Pulaski	1880	1937	74,000	1.9 mt

Total Production = 6.3 million tons

Montgomery County claimed the largest number of mines and highest output in the Valley Coalfield. Production peaked in 1943, when wartime miners unearthed more than 202,000 tons. Records are incomplete, but coal operators extracted

an estimated six million tons of coal from Montgomery and Pulaski County mines before their demise in the 1950s. Peak recorded employment in the Valley Coalfield was 722 in 1934.

Virginia Coal Spans the Globe

During the late-19th century heyday of U.S. railroad construction, ribbons of steel quickly formed a transportation web from the Central Appalachian coalfields to consumers in every major eastern and midwestern U.S. population center, and by ship to worldwide ports-of-call. Owing to location and evolving rail transport connections, coal from Southwest Virginia ultimately found its way to buyers in New England, the Carolinas, western Pennsylvania, Ohio, Michigan, Indiana, Wisconsin, Minnesota, Missouri, and the Great Lakes region.

After the C&O and N&W railroads built coal export piers at Hampton Roads in 1883 and 1885, large quantities of coal from Southwest Virginia (and other Central Appalachian states) could easily reach markets along the Atlantic Seaboard. Virginia coal soon totaled about 16 percent of shipments from Hampton Roads to at least 38 ports and countries, including Buenos Aires, Capetown, Chile, Genoa, Gibralt

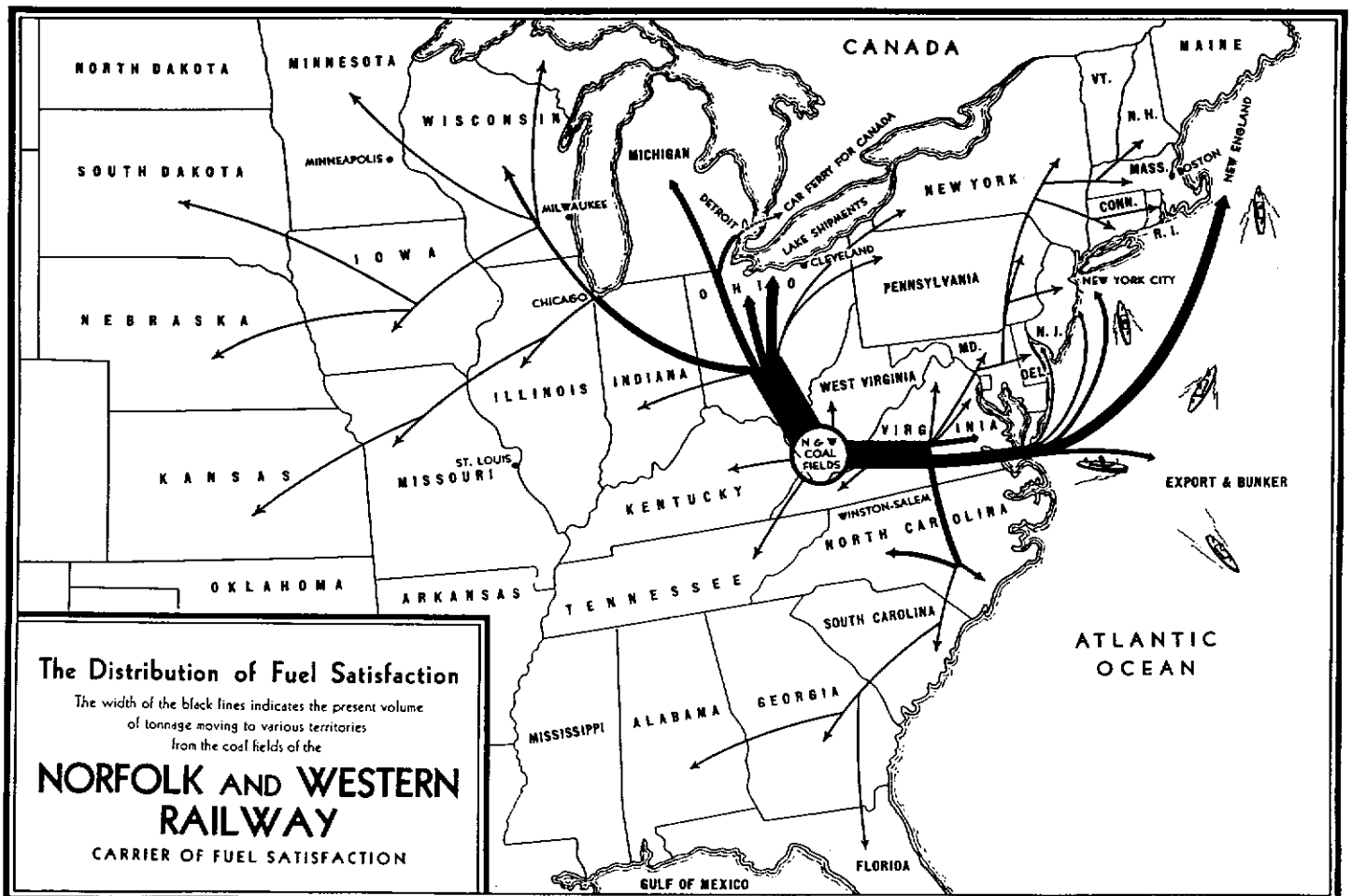
tar, Havana, Japan, Manila, Montevideo, Naples, Trieste, and Rio de Janeiro.

Southwest Virginia Boom and Bust

During the first two decades of this century, Southwest Virginia firmly established itself as a world coal supplier. The region's coal markets were diverse and far-reaching, with shipments of high-grade coking coal to steel makers in the Midwest and abroad; and steam coal to industry and utility buyers throughout the East.

Labor-intensive mining techniques in Southwest Virginia gave way to mechanization by the 1920s and 1930s. Electric locomotives, shuttle cars, chain cutters, drills and jigs soon replaced mule trams, hand augers, picks, and shovels. Productivity was on the increase until the Great Depression of the 1930s crippled demand for U.S. steel, and consequently the Central Appalachian coal industry. The coalfields plunged into turmoil as wages shrank and jobs vanished.

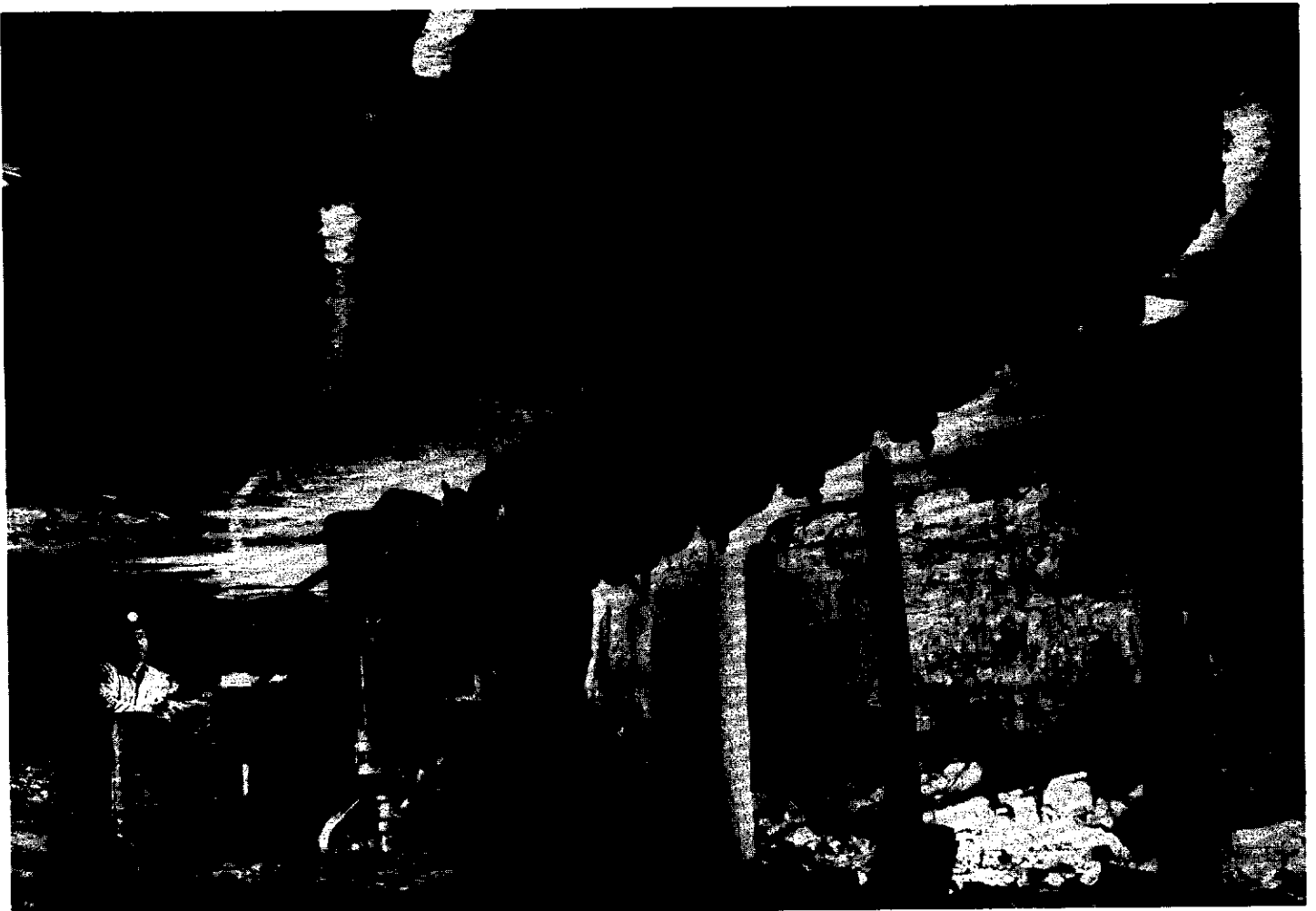
Industrial production during the early 1940s created a surge in coal demand, and by the end of WWII coal fueled almost 75 percent of the nation's energy and industrial needs. The Virginia coal industry boomed in a variety of markets: 200,000

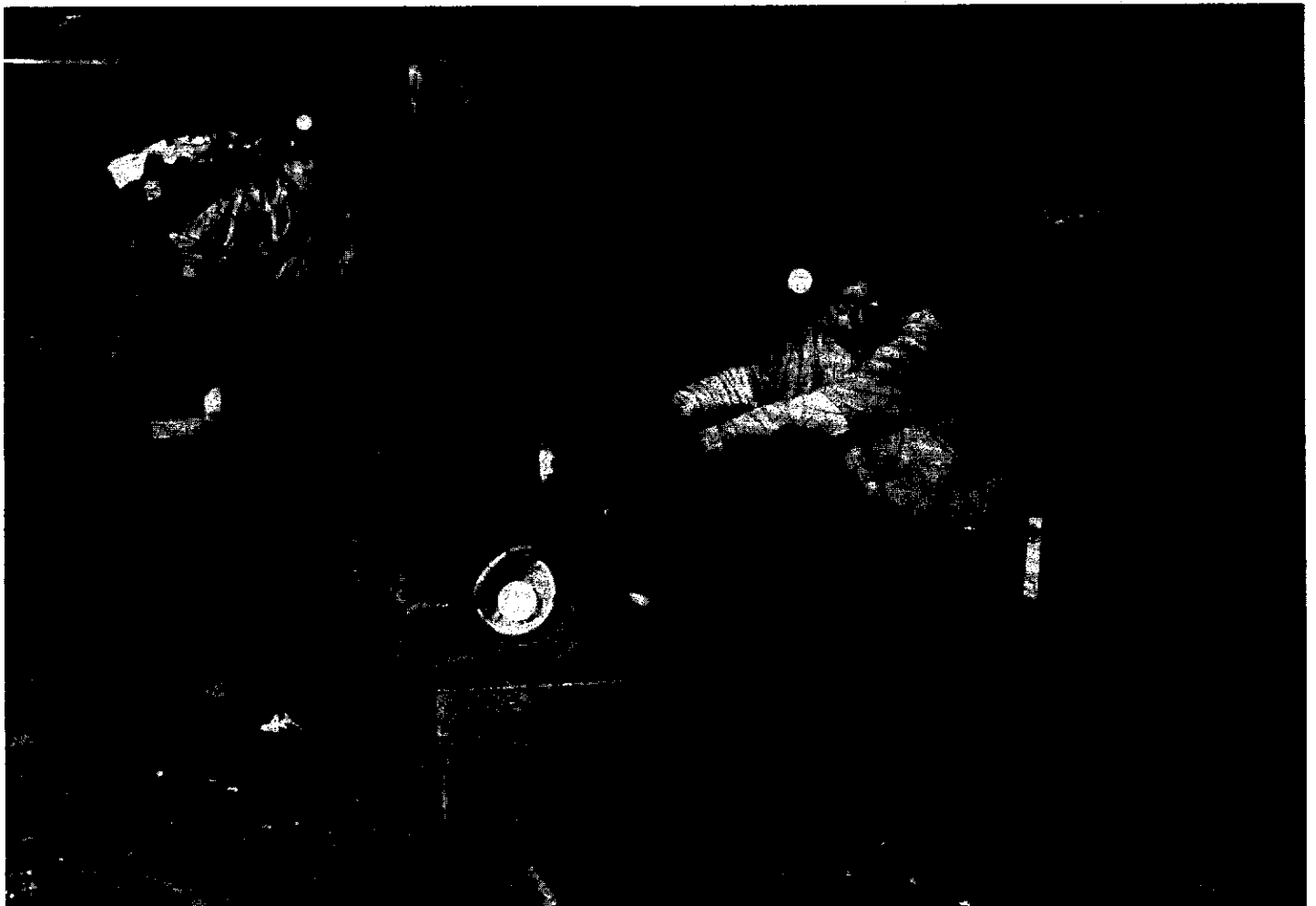
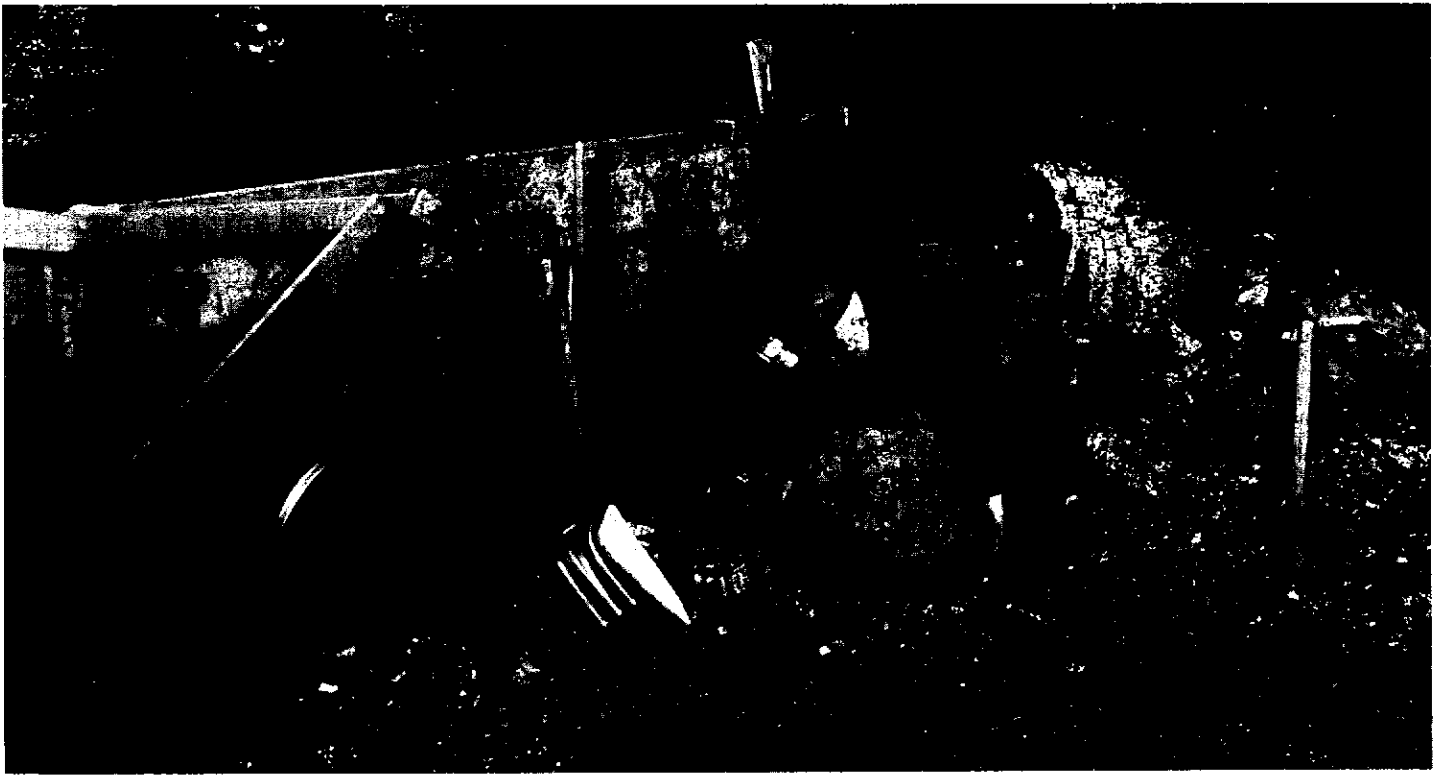


Circa 1930s map from Norfolk & Western advertising brochure shows the distribution of Central Appalachian coal on their rail lines. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*



Virginia coal operations gradually mechanized throughout the first half of the 20th century. Breaking coal with explosives and picks gave way to chain cutters (below) in the 1930s and continuous mining equipment by the 1950s. Hand loading and mule haulage was almost universally replaced by electric mine motors by the 1960s. *Top photographs, Harry W. Meador Coal Museum/ Westmoreland Coal Co. (Big Stone Gap); bottom, N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*





tons were sold each year during the late 1940s to shipping companies, 400,000 tons to residential distributors, two million tons (mt) to railroads, and four mt as coking coal to the steel industry. Another million tons reached Lake Erie ports, and five mt left Hampton Roads for coastwise delivery to East Coast consumers and export to coal buyers abroad.

Until WWII all coal from Southwest Virginia was mined underground. Surface mining with bulldozers, front-end loaders, and steam shovels made its debut in Wise County in 1944. This highly productive method contributed an increasing share of Virginia coal production for three decades.*

Although profits rose after 1949, coal rapidly lost many of its traditional buyers. With large-scale conversions to inexpensive and more convenient natural gas and oil during the 1950s, both U.S. and Virginia coal suffered losses in transportation (ship and rail), residential, municipal gas, chemical feedstock, industry, and utility markets. Coal now supplies roughly 25 percent of national energy supplies, paralleled by cycles of boom and bust across Central Appalachia.

Between 1949 and 1954 many large coal operations in Southwest Virginia closed, laying off 40 percent of the region's miners (from 18,341 to 10,888). A number of small, non-union operations barely managed to fill the production gap and maintain coal output (16 mt in 1949 fell to 15 mt in 1954). Membership in the United Mine Workers of America

declined to fewer than half of the region's coal miners, while the number of mines operating in Virginia increased from a low of 212 in 1950, to 555 in 1954, and an all-time high of 1,807 in 1959 (13,799 miners produced 28.2 mt).

Because most of these small operations were largely unmechanized (miners hand-cut and "shot" the coal with explosives, using ponies for haulage) they were responsible for less than 10 percent of total production during these years. In larger operations, however, electric locomotives for mine haulage and other mechanized equipment (for undercutting, drilling, and loading) were becoming more common. By 1955 more than 90 percent of total production was mined by machine. Surface mining with augers started in Buchanan County during this period, producing 275,000 tons in 1953.*

The thick, rich coal seams that fostered the Southwest Virginia coal industry's beginnings near Pocahontas in Tazewell County were mined out by the mid-1950s. Coal mining in the region has since followed about 20 profitable seams that stretch beneath the rugged terrain through Wise, Dickenson, and Buchanan counties (see maps, next page).

The number of miners working in Southwest Virginia peaked in 1942 at 19,416 (20.4 mt production), and the number of mines in 1959 at 1,807 (28.2 mt production). Since then however, both have declined even as productivity and production continue to rise. With modern mechanization and extraction methods 11,096 miners at 545 mines produced a record 46.4 mt output in 1988. Remaining miners earn approximately \$14/hr, and if employed year-round gross about \$30,000/yr.

* Surface mining claimed a third of Southwest Virginia's 40 mt coal production by 1976 (12.9 mt). Environmental and reclamation standards imposed by the federal 1977 Surface Mine Control & Reclamation Act and ensuing state regulations brought an immediate decline in surface mining operations region-wide. Surface mine production in Southwest Virginia in 1988 was 7.5 mt, or 17 percent of the state's record 46.4 mt production.

* Auger mining peaked in 1966 at nearly 2.2 mt, declining to only 397,000 tons by 1988.

Southwest Virginia Coal Production: 1882-1988

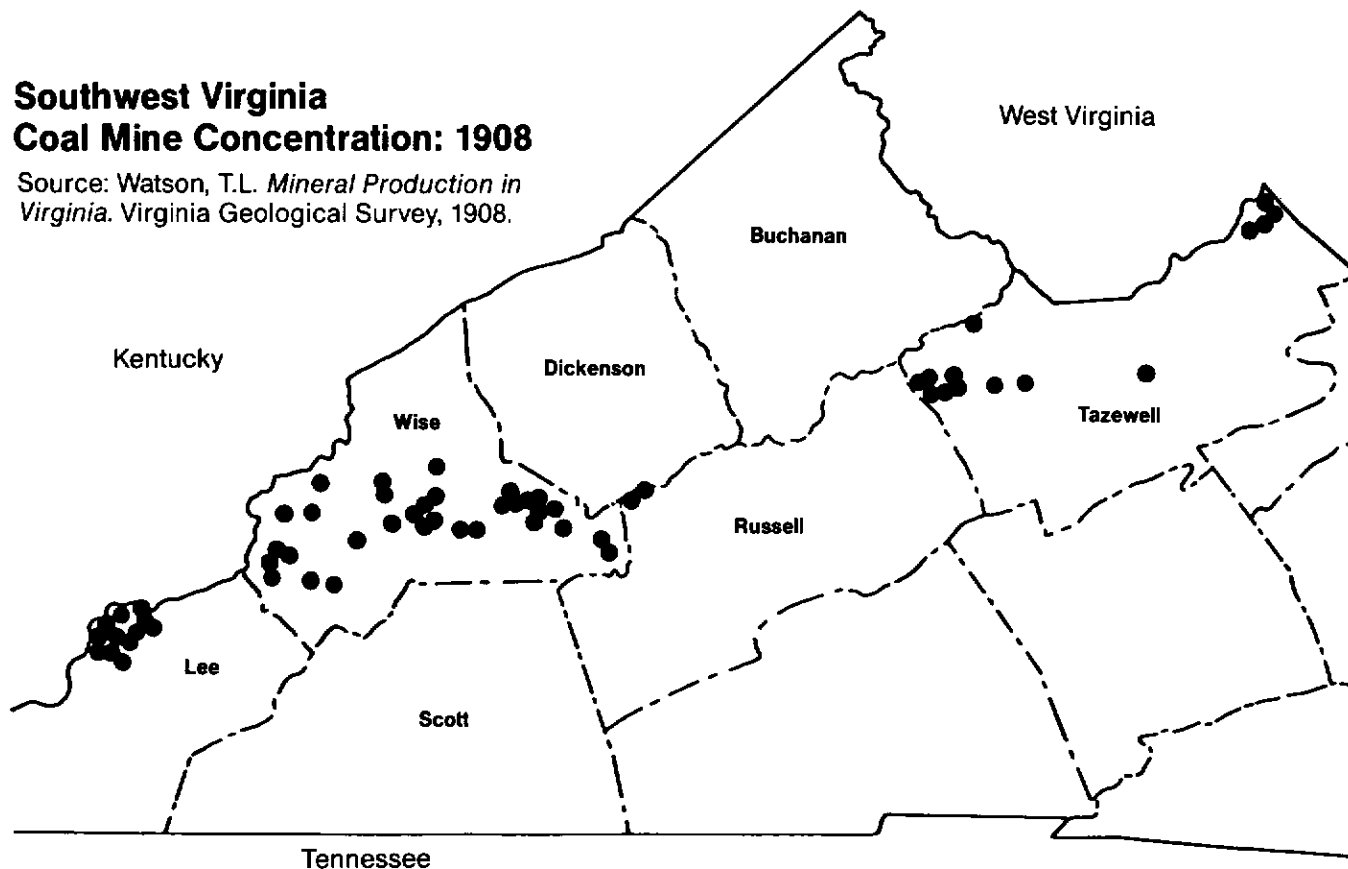
Since the first rail shipments from the region in 1883, Southwest Virginia's seven coalfield counties have produced more than two billion tons of coal, with an average price that ranged from less than \$1/ton to more than \$35/ton. Keeping pace with the rise in price, average productivity rose from less than one ton per miner/shift to 20 tons per miner/shift.

County	First Recorded Shipment	Peak Year	Peak Tonnage	Total Shipped
Tazewell	1882	1943	4,800,320	196,786,857
Wise	1892	1985	14,103,658	769,219,269
Russell	1901	1957	2,745,060	119,451,586
Lee	1907	1987	3,118,439	91,141,293
Dickenson	1917	1967	9,529,472	289,202,881
Scott	1918	1986	123,816	2,352,725
Buchanan	1932	1988	19,769,235	716,751,459

Total Southwest Virginia Coal Production = 2,184,906,070 tons

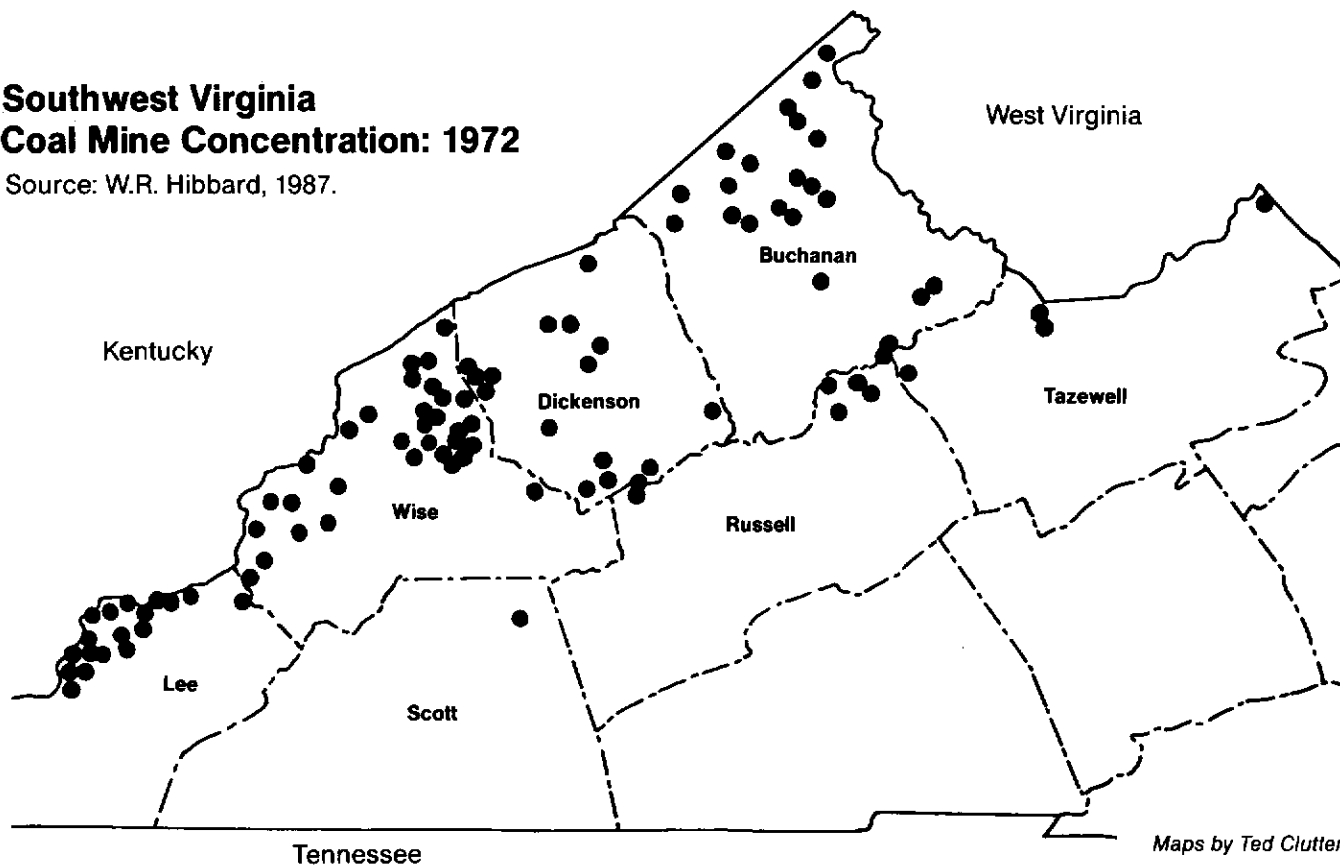
Southwest Virginia Coal Mine Concentration: 1908

Source: Watson, T.L. *Mineral Production in Virginia*. Virginia Geological Survey, 1908.



Southwest Virginia Coal Mine Concentration: 1972

Source: W.R. Hibbard, 1987.



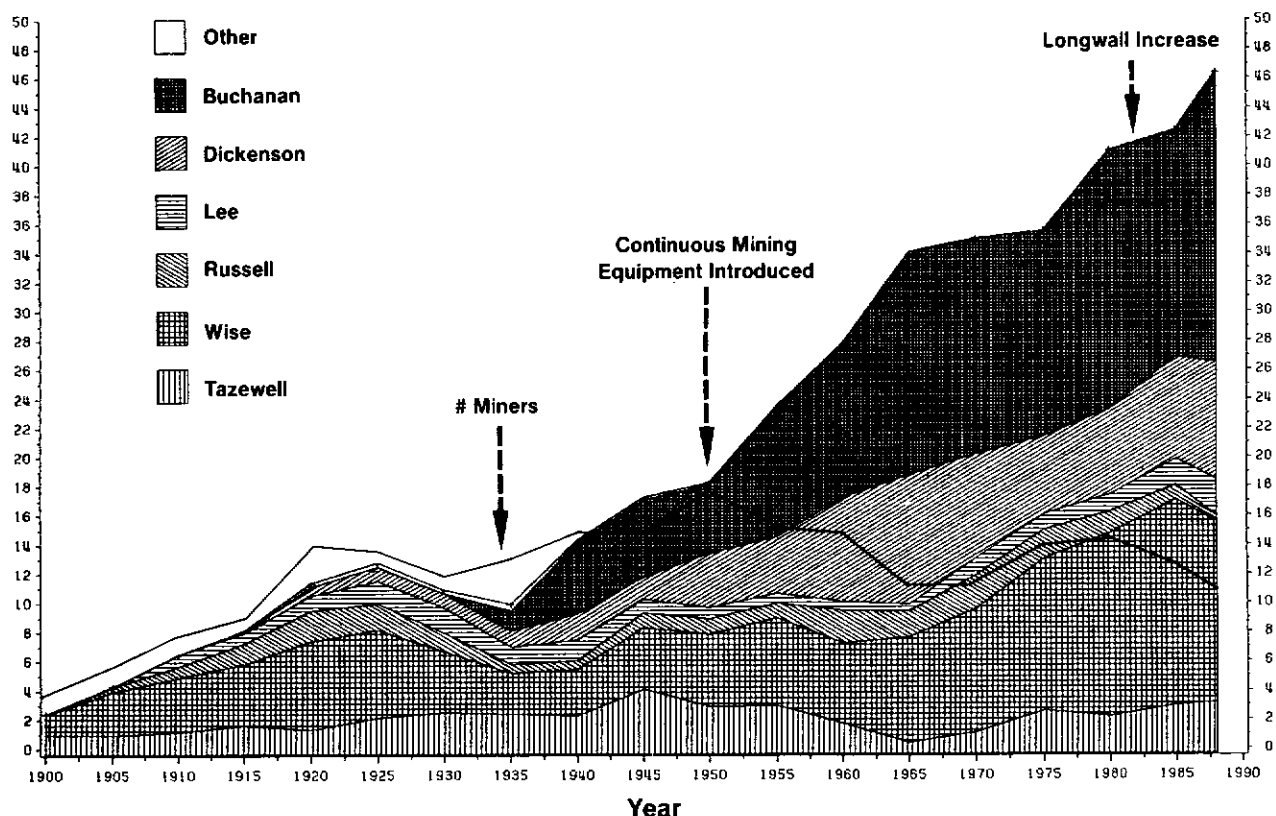
Maps by Ted Clutter

Virginia Coal Production By County: 1900 - 1988

(Source: John Randolph, VCCER 1989)

1,000 Miners

Million Tons



Railroad Deregulation

Throughout its history, the growth and economic viability of the coal industry has been inexorably tied to railroads. Indeed, railroads and the U.S. coal industry are interdependent: today approximately 65 percent of national coal production moves to market by rail, and coal makes up 40 percent of total rail tonnage.

For most of the past century, the federal government regulated railroads, with rates set by the Interstate Commerce Commission. Regulation may have limited rail industry competition, but it also guaranteed that coal operators and distant consumers were served by several railroads — with attendant cost-regulated switching, trackage, and transshipment* privileges. It made little difference to either producer or consumer which railroad transported their coal — rail rates were equally competitive.

With railroad deregulation under the 1980 Staggers Act (Public Law 96-448; 94 Stat. 1895), however, railroads gained the freedom to set rates and enter into long-term, confidential contracts with coal consumers. Now utilities, industry,

and exporters first negotiate coal transport costs with the railroads that serve their facilities, and usually accept bids only from mines served by that carrier. The result is that coal industry competition now more often depends on delivered cost than on mine-mouth coal prices.

The six railroads that served Southwest Virginia coal mines during the 1960s are now two (Norfolk Southern and CSX), that are free to set rail rates and user fees for switching and transshipment. Nearly all Virginia coal mines are served by a single rail system, Norfolk Southern (NS). Approximately 85 percent of Virginia's annual coal production is carried to market by NS; the remainder by CSX Transportation.

The majority of large coal consumers in Virginia, however, are located in the eastern portion of the state, served principally by CSX rails that lead to coal mines in West Virginia and Kentucky. Because a single carrier can usually offer lower transport rates, mining operations in these states can often deliver coal to Tidewater coal consumers at a lower cost than Virginia producers. Whenever possible, utilities such as Virginia Power turn to barge transport to avoid transshipment costs related to delivery of Virginia-mined coal by NS. Recent state tax incentives to utilities and cogenerators that burn Virginia coal have offset some of rail cost differentials between NS and CSX, raising in-state consumption.

* Transshipment is the switching of railcars from one railway line to another.

Industry Volatility Continues

During the past 25 years, Virginia coal has suffered under the restructuring of the U.S. steel industry and resultant declines in metallurgical coal demand. With strong export competition from new steel producers abroad during the 1960s and 1970s, the U.S. coking coal market was halved (to 30 percent of the total coal market), and continued its decline into the 1980s.

To survive, coal companies operating in Virginia have consolidated, tightened their belts, and invested in new technologies. Higher utility demand created by skyrocketing petroleum prices during 1970s oil shortages provided some relief as utilities switched back to coal, but today's demand again faces lower oil prices and clean-burning alternate fuels such as natural gas. To survive, many companies operating in Virginia now sell premium quality coking coal in the steam coal market — at a price one third less than its value in the metallurgical market.

The trend toward large company ownership results from the competitive need for expensive, high-productivity mining equipment and cleaning plants. Both steps were necessary to meet the demands of not only changing domestic markets, but international markets as new competitors such as

Australia and Colombia began exporting coal during the past decade. The largest coal corporations currently operating in Southwest Virginia include Island Creek in Buchanan County; Westmoreland in Wise County; Pittston in Dickenson and Russell counties; and Coastal (ANR) in Wise and Dickenson counties. United, the largest Virginia-based coal company, operates primarily in Buchanan County. Powell Mountain operates in Lee County.

In 1980, Polish and Australian labor upheavals led to a short-lived U.S. coal export boom, principally to European industrial and utility buyers. Then a 10-week strike by the United Mine Workers of America the following year presented the specter of continuing 3-year cycles of labor unrest to overseas coal buyers, forcing them to rethink commitments from "unreliable" U.S. sources. Coal exports plummeted.

By the end of the decade, however, both U.S. and Virginia coal exports rebounded dramatically, especially to European metallurgical buyers. Exports from Hampton Roads were up 22 percent (to 45.4 mt) in 1988, and another 9 percent (to 49.4 mt) in 1989. At present, Hampton Roads piers ship about half of U.S. export coal — Virginia coal currently claims approximately 25 percent of Hampton Roads coal tonnage.



1957 aerial view of Norfolk & Western rail car marshalling yard (capacity 8,000 cars) and coal piers at Lambert's Point in Norfolk, Virginia. N&W is now part of Norfolk Southern Corp. Hampton Roads shipped 45.4 mt during 1988, about half of all U.S. coal exports. Virginia-mined coal claimed approximately 25% of that tonnage. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*

Quality of Life in Virginia's Coalfields

Richmond Coalfield Basin

The Richmond Basin was an agricultural area when mines were developed in the late-18th and early-19th centuries. Geologic conditions made mining difficult for coal that was often of poor quality. Capital requirements were minimal, and like labor was provided by local entrepreneurs. Mines were operated like plantations with slaves and white overseers. Coal was cut with pick and shovel in pits or deep slope mines, and raised to the surface by mule-driven winches. Working these primitive operations was risky, with a number of explosions — and fatalities — during the 1800s.

Valley Coalfield

Initial coal development ventures in this agricultural region were entirely locally owned and controlled. Early mines produced coal for use by farmers and blacksmiths. Miners were native to the area. The narrow-gauge Altoona and the Belle Hampton Railways connected Pulaski County mining camps and communities with N&W's main line. A company town maintained by Empire Mines claimed 55 houses, a commissary, and a boarding house. The Montgomery County mining town of Merrimac was built in part by Virginia Anthracite Coal & Railroad Co., with 77 company houses.

Southwest Virginia Coalfield

Before railroads established the coal industry in the mountains of Southwest Virginia, the region was inhabited by a few rugged descendants of Scotch, Irish, Welsh, and German immigrants, who eked out a meager existence by scratch farming, hunting, trapping, and dealing homespun products in a largely barter economy.

Unlike the Commonwealth's other coal-bearing regions, Southwest Virginia depended on outside investment to finance not only its rail transportation network, but provide the capital equipment and manpower necessary to exploit the region's vast quantities of high-quality coal. Railroads were built by far-away corporations specifically to fire their equipment and haul the remainder to distant markets; mining companies were formed by non-resident entrepreneurs.



Black coal miner, 1937. Early Virginia mining camps and towns maintained strictly segregated societies. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg, VA).*

For decades after coal mining began, coalfield quality of life was inexorably tied to the compassion of coal companies. Immigrant miners and blacks were mostly recruited in other states and dumped in isolated, segregated societies. Large operations first assembled tent camps, which evolved into towns with company-built housing, stores, schools, churches, power plants, and water works. Even with all the "modern" conveniences they offered, however, Appalachian coal company towns were rough places — lawlessness and violence prevailed.



Children were employed as miners at many of Southwest Virginia's earliest coal operations. Picture courtesy Early Smith (Falls Mills, VA).

During the early years, coal miners probably earned enough money to support a family of four. Austere as company town life may seem in retrospect, coal was a boom for the people of Central Appalachia, who were tired of lumbering, trapping, and tilling the rocky soil. As miners, they could live in rented company houses and shop (with company currency called scrip) at company stores. Not only were these houses more comfortable than hillside shacks, wares from company stores were often of higher quality than homemade products.

Company towns improved the quality of life for many in Southwest Virginia, but were often equated by social reformers with efforts to keep labor unions out of the coalfields. Mining companies were accused of controlling workers with low wages, payments in scrip, offers of company-owned housing, and credit at company stores. On the other hand, small firms usually left living conditions to the individ-

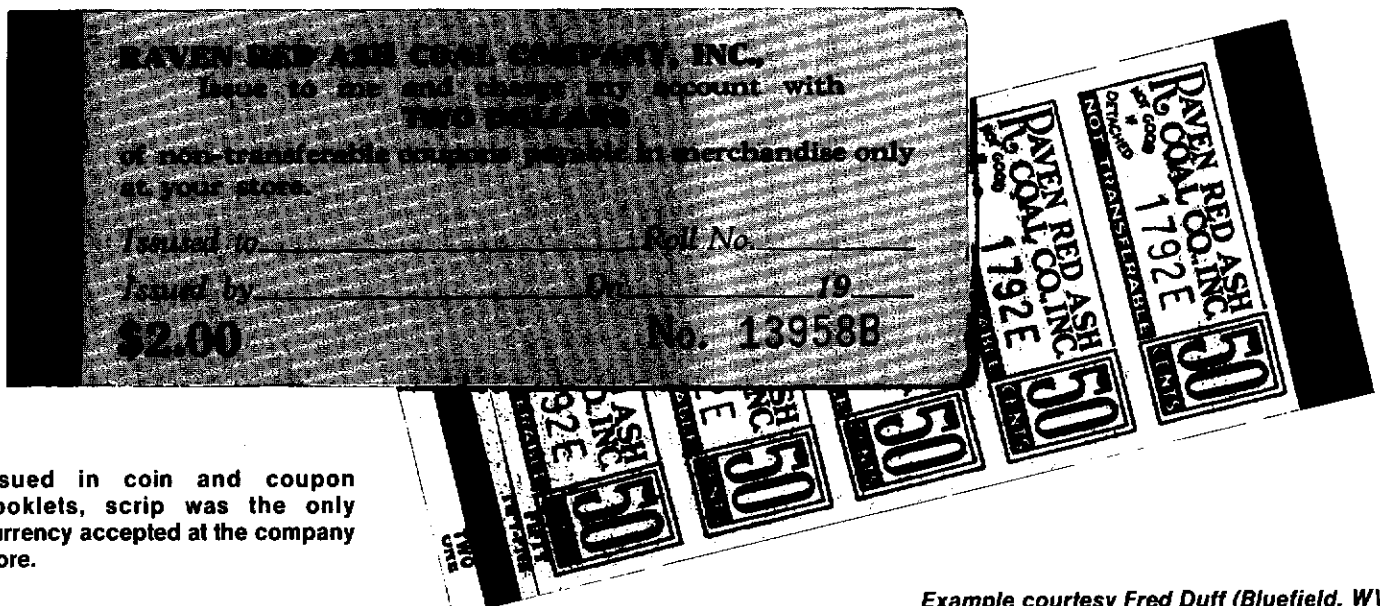
ual miner, who often built a shack in a hollow near the mine and drank from a water supply contaminated by sewage.

The initial years of mining in Southwest Virginia offered working conditions underground that were wet, dirty — and risky. Injuries and fatalities were commonplace, especially after the introduction of mining machinery. Coal companies cared for their people, however. When a miner died in an accident, the company frequently paid out a life insurance policy of a few thousand dollars to his widow and allowed the family to continue living in a company house.

With volatile economic periods of coal industry boom and bust, living conditions in Southwest Virginia varied with wage rates and cyclic unemployment. The United Mine Workers of America (UMWA) organized Central Appalachian coal miners during the early 1930s, resulting in improved work and living conditions. At the time a miner's pay averaged \$5/day (mostly in scrip, the only currency accepted by the company store).

The Great Depression forced many coal miners out of work, but during WWII prosperity returned. Following the conflict the U.S. war machine rapidly turned its tooling and factories to production of consumer goods, while the federal and state governments restarted road construction and public works projects begun in the 1930s. Coalfield living conditions improved as small companies merged and scrip was eliminated. Towns began to grow. Availability of automobiles, credit, and newly paved roads in Southwest Virginia freed the miner and his family from the company town. They could now live where they could afford within driving distance to the mine.

Though the years following WWII were very profitable for the Southwest Virginia coal industry and its employees, coal market losses to oil and natural gas during the early 1950s brought hard times to the coalfields once again. As coal markets declined, companies looked to increased mechani-

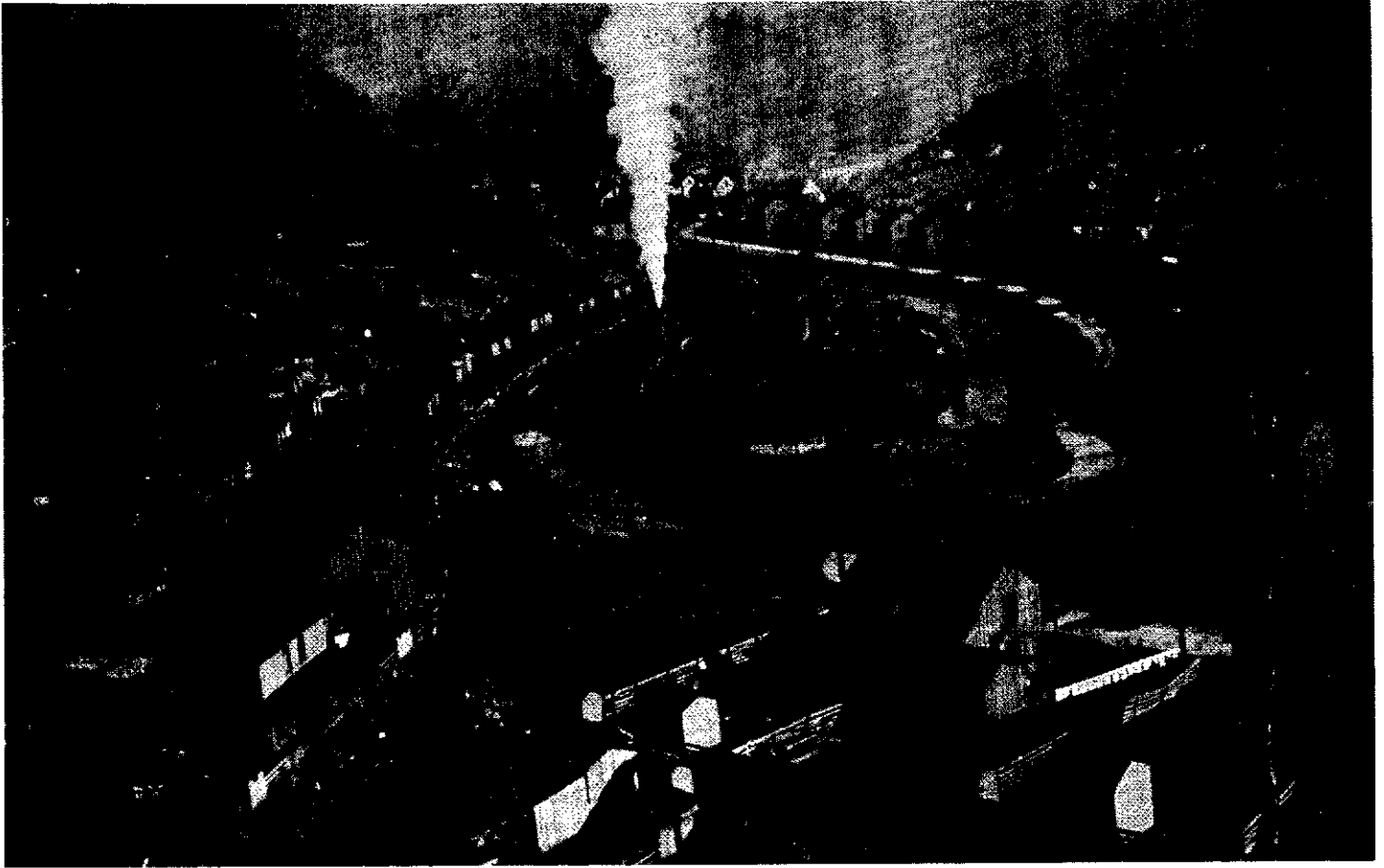


Issued in coin and coupon booklets, scrip was the only currency accepted at the company store.

Example courtesy Fred Duff (Bluefield, WV).

zation to increase profits. The introduction of continuous mining equipment during the 1950s raised productivity, but severely reduced employment by large mining companies. Many of the region's miners at this time managed to scrape a living from small, non-union truck mines, much to the detriment of working conditions, wage rates, and UMW membership.

Another coal boom occurred during the early 1980s, but today's competitive realities have forced many coal companies operating in Virginia to cut their labor force, replacing them with highly productive equipment (longwalls) and methods (pillar extraction). Unemployment, which was never low in the region, has ironically grown in tandem with recent coal production highs.



A typical Southwest Virginia company town was Stonega (Wise County), shown here in 1917. Reprinted from Train Pictures (ABCD Publishing, Appalachia, VA).

Richmond Basin Coalfield

Coal Discovery and Early Use

Coal was first discovered in Virginia in 1699 by French Huguenot refugees, when a hunter in their group uncovered a coal outcrop after pulling a small tree from a stream bank. The site was approximately 1.5 miles above "Great Upper Creek" (14 miles west of Richmond in present-day Goochland County).

The coal outcrop was visited shortly afterward by Colonel William Byrd II of Wedgewood, who reported the finding to the Colonial Council of Virginia in a letter dated May 10 and 11, 1701. The following year, the Council granted permission to David Menestrier, a Huguenot blacksmith, to burn the coal in his forge.

Colonel Byrd noted that the land surrounding these initial finds had not yet been granted to the French settlers, and in 1704 took a patent for 344 acres that included the coal outcrops. His diary, which devoted more entries to prayer, dancing and eating than to coal, describes active mining at "Falling Creek" near Manakin between 1709 and 1711.

Subsequent land patents (1715 and 1717) identify "Cole Pit Road" in the same area, and records note coal operations on the Appomattox River in 1720, and near Midlothian in 1730 and 1745. Blacksmith John Wooldridge acquired coal lands in the Richmond Basin during the 1730s. Another blacksmith, Jacob Trabue, also claimed lands with the "liberty to dig coal." A 1736 testament willed land "at a place called Coal Pitt."

Operations were developed at Deep Run (near Gayton) in Henrico County in 1760, at Midlothian and Black Heath in 1802, at Dover (near Manakin) in 1805, at Huguenot (Powhatan County) in 1820, and at Coalboro and Winterpock (Chesterfield County) in 1822. Thomas Jefferson commented on the Richmond Basin coal pits in his *Notes on Virginia*.

First U.S. Coal Shipments

The Richmond Basin Coalfield claimed the first coal shipment in the colonies, and is credited with starting the U.S.

coal industry. As noted above, the first use of Richmond Basin coal was primarily by local blacksmiths within wagon or boat distance of the source.

Virginia's early coal transportation network relied on the Buckingham Road (1730) to Richmond. Shipments increased after the James River & Kanawha Canal was built around rapids near Richmond in 1795. By 1802 the Midlothian Turnpike was built from the Black Heath Pits, and the canal was extended to Westham by 1808. In 1814 the Richmond Turnpike reached the Deep Run Pits, and by 1828 the Tuckahoe Canal connected Basin coalfield operations with the James River.

Coal shipments to Philadelphia from the Port of Richmond probably began around 1750. Coastwise shipments to New York were recorded as early as 1758, with exports to Bermuda by 1761. Coal sold in Richmond during the late-1700s in 90-pound bushels, with 25 to a 2,240-pound ton. This standard was later changed to 80-pound bushels, with 25 to a 2,000-pound short ton. Transport was the principal factor that limited wider use of Richmond Basin coal, but a coal import tariff imposed in 1794 broadened the region's markets. The War of 1812 disrupted northward coal shipments.

Early Railroads

Mining expansion in the Richmond Basin followed the growth of railways. At first these were primitive mule-driven tramways, and later steel rails that carried steam locomotives.

In 1831 Colonel Croset built the Chesterfield & Manchester Railroad (later called the Brighthope) to carry coal 13 miles from the Black Heath mines near Midlothian to the south bank of the James River at Manchester. Wagon loads of coal moved by gravity to the river on steel-capped wooden rails; mules pulled empty wagons back to the mines. Additional mule-powered trams (1 to 5.5 miles in length) reaching the James River included the Etna, Duval, Black Heath & James River, and the Tuckahoe.

The invention of the steam-powered locomotive enabled Virginia's first coal mining ventures to flourish. In 1840 the

Tuckahoe & James River Railroad (a feeder line from the Richmond, Fredericksburg & Potomac Railroad) reached the Carbon Hill mines and Deep Run Coal Pits northwest of Richmond. The Clover Hill Railroad was chartered in 1841 to carry coal from the Clover Hill, Coalboro, and Winterpock mines (Chesterfield County) to the Richmond & Petersburg Railroad (now Seaboard) at Chester, with a spur to Epps Falls on the Appomattox River. The Richmond & Danville Railroad (R&D) extended from Richmond to Midlothian and beyond by 1850, replacing the Chesterfield Railroad. The Powhatan & Farmville Railroad connected mines near Powhatan with the R&D at Moseley Junction.

The renamed James River & Kanawha River Canal reached Maiden's Adventure in Powhatan County by 1825, and Lynchburg by 1840. Tolls did not cover costs, however, and eventually the canal was sold to the Richmond & Allegheny Railroad. The Richmond & Danville Railroad (later Seaboard) was completed in 1850. The tracks followed the abandoned road bed of the Chesterfield & Manchester Railroad, bridged the James River to Richmond, and pushed on to Danville past feeder lines to the Midlothian and Black Heath mines.

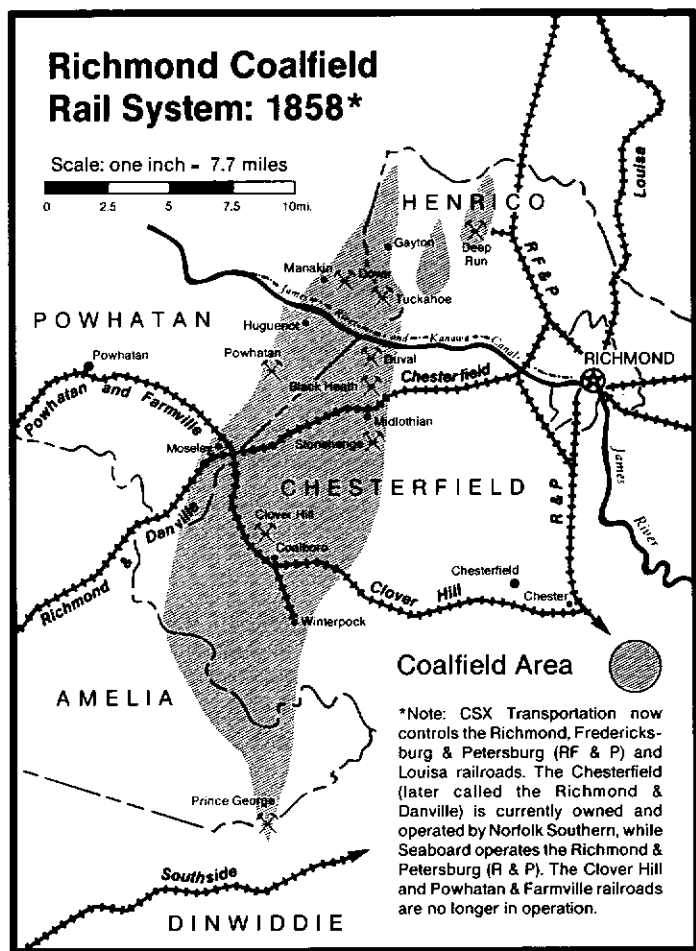
Mining Methods

With several steeply pitched seams up to ten feet thick separated by layers of slate, Richmond Basin coal proved difficult to produce. Outcrops were mined by trenching to depths of 25 to 35 feet. Slope mines followed seams underground to a depth of about 100 feet, where horizontal drifts followed the coal. Vertical shaft mines were dug with hand tools until coal was found, usually at depths between 120 and 350 feet. Shafts were supported by timbers or lined with bricks, and often connected to older slope entries for ventilation, haulage, and escape routes. At 650 feet, the Black Heath Mine was the Basin's deepest operation.

Richmond Basin miners were slaves hired from local plantations. In underground operations the men undercut the coal with picks and then barred or chopped it from the mine face. After 1830 black powder was used to "shoot" the coal after it was undercut, sidecut, and drilled with hand augers. Loose coal was shoveled into carts, then hauled by mules. Mine water was removed with bucket hoists powered by mule-driven windlass. Near the beginning of the 20th century operators used steam-powered hoists to lift water and coal from the mines, where slate was hand picked from each load.

Coal seams in the Richmond Basin contained high levels of methane, and shaft mines were poorly ventilated. Miners removed the deadly gas by drawing a lit candle to the coal face with a pulley, where ignition "cleared" the area to be worked. Fires built outside entries provided draft that drew fresh air through the operations. By the late-1800s two shafts were dug for each mine, allowing controlled air flow with fans powered by steam engines.

The first recorded mine explosion in the Richmond Basin Coalfield killed 40 miners at the Black Heath Mine in March 1838. Methane gas continued its deadly rampage in explo-



sions at the Clover Hill Mine in 1850 (7 dead); the Chesterfield Mine in 1854 (20 dead); the Midlothian Mine in 1855 (55 dead); the Brighthope Mine in 1859 (9 dead); the Racoon Mine in 1862 (17 dead) and 1875 (3 dead); and again at the Midlothian Mine in 1876 (8 dead) and 1882 (32 dead).

Coal Production Peaks

Mining records during the 1800s are unreliable; peak coal production for the Richmond Basin Coalfield may have been either 201,600 tons (Eavenson) or 175,000 tons (Wilkes) in 1835.

According to a contemporary newspaper account, in 1850 the Richmond Basin claimed six coal mines in Chesterfield County, four in Goochland County, and four in Henrico County. During that year, operators used 9,029 tons of coal at their mines for heat; and for pumps and hoists driven by steam engines. Shipments included 57,051 tons by wagon and 39,224 tons by canal; 46,123 tons on the Chesterfield Railroad and 43,077 tons on the Clover Hill Railroad (these figures include unavoidable numerical redundancy).

Royalties to land owners at this time were 2 cents per bushel, or 50 cents per ton. Coal sold in Richmond for the then-exorbitant price of 25 cents per bushel (\$6.25/ton). An 1858 map shows the location of 47 pits and shaft mines that operated intermittently around the Basin's edge:

- Dover Pits at Manakin
- Tuckahoe, Deep Run, and Carbon Hill Pits near Gayton
- Wooldridge and Union Pits at Midlothian
- Gowrie and Black Hill Pits in the Black Heath Basin
- Trabue and Sallee's Pits north of Midlothian
- Stonehenge and Midlothian Pits in the Stonehenge Basin
- Clover Hill Pits at Coalboro
- Rowland's Pits and Racoon Slope at Winterpock
- River Pits at Huguenot
- Powhatan Pits in Powhatan County

The Civil War and Coalfield Decline

During the Civil War, Richmond Basin coal production was of course directed toward the Confederate effort, with annual output reduced to only 40,000 tons by 1863. An arsenal near the James River in Chesterfield County was the site of cannon foundries that used Black Heath coal and iron ore from Montgomery, and possibly Wise, counties.

The conflict marked the beginning of a production decline for the Richmond Basin Coalfield, especially as higher quality coal began reaching the Basin's traditional markets from Maryland and the Pennsylvania's anthracite fields.

Following the war many mines reopened, but never on a sustained basis. At that time the Louisa Railway, and later the Virginia Central Railway (part of the Chesapeake & Ohio Railroad, established in 1868), began carrying Central Appalachian coal from West Virginia to Richmond markets. By 1880 a U.S. Census map showed only four mines operating in the Basin (Chesterfield County). During the same year the James River & Kanawha Canal Co. was sold to the Richmond & Allegheny Railroad (R&A), which subsequently laid track along the deteriorating canal tow path first to reach Lynchburg, then Clifton Forge by 1881.

Only the Racoon Mine operated in the Richmond Basin during 1887, at Winterpock in Chesterfield County. Worked by the Brighthope Rail Co., the Racoon Mine produced 30,000 tons that year, selling for \$1.60/long ton (2,240 lbs.). Analysis revealed a quality of 57 percent fixed carbon, 32 percent volatile matter, 7 percent ash, and 2 percent sulfur.

The Chesapeake & Ohio Railroad purchased the R&A in 1890, and subsequently carried little Richmond Basin coal. During that year mines at Winterpock flooded, and in 1891 mines near Gayton in Henrico County produced only 13,075 tons. An 1898 U.S. Geological Survey map shows 34 mine sites in the area, but an accompanying map of the Midlothian District shows 22 mining sites, including Burfoot, Sallee, Bingsley, Blackheath, Cunliffe Basin, Etna, Fearnought, Union, Sinking Shaft, and Grove Shaft.

By 1904, Richmond Basin coal production had slipped to only 2,100 tons. A 1907 Virginia Geological Survey (VGS) map gave the location of 34 mine sites: 22 in Chesterfield County; five in Powhatan County; five in Goochland County; and one each in Henrico and Amelia counties. A 1908 VGS map showed 11 mine sites: six in Chesterfield County; two each in Powhatan and Henrico counties; and one in Goochland County. A 1909-1910 VGS report listed the following operations: Clover Hill Mines (Chesterfield Coal Co.), Midlothian Mines (James River Coal Co.), and Carbon Hill Mines (Old Dominion Development Co.).

The Richmond Basin Today

Coal reserves in the Richmond Basin proved disappointing. The center of the 180 square-mile region is barren of mineable coal, with less than two square miles in a thin band around its rim that supported mining operations. Coal quality was variable, with fixed carbon ranging from 46.7 to 81.6 percent, volatile matter from 9.6 to 38.6 percent; ash from 4.0 to 22.0 percent, and sulfur from 0.06 to 4.1 percent. As a rule, Richmond Basin coal was not of coking quality. Records show that the region yielded about nine million tons during nearly two centuries of mining between 1748 and 1924.

Today the Richmond Coalfield Basin is rural area used primarily for forestry and agriculture, with small, scattered communities that bask in the rich commercial, government, and industrial development of nearby Richmond. Only the suburban villages of Manakin, Midlothian, and Winterpock remain. The feeder railways are gone, but mine portals still exist — overgrown by vegetation and difficult to locate.

Valley Coalfield

MONTGOMERY COUNTY

Coal Discovery & Early Use

Coal was discovered in the late-18th century in Virginia's Valley Coalfield, which covers portions of Montgomery and Pulaski counties. According to 1799 records John and Francis Preston owned land in Montgomery County that contained "stone coal" (semi-anthracite) on Laurel Creek near its confluence with the North Fork of Tom's Creek.

Reference to a rifle barrel mill operated by Jacob Broce (a former Hessian mercenary) in a deed to property owned by John Preston on Slate Branch Creek suggests that small-scale mining and iron smelting operations existed in Montgomery County shortly after the Revolutionary War. Pit mining was recorded in 1790 on Lower Tom's Creek at the foot of Brush Mountain. Various accounts from the early-1800s record a number of blacksmiths in the county who used small amounts of locally mined coal in their forges.

An 1833 map by James Herron shows coal mines at Coal Bank Hollow, near Kanode's Mill on Brush Mountain, and on the Slate Branch near Merrimac. The 1840 U.S. Census officially reported 200 tons of coal production in Montgomery County.

Coal Industry Beginnings

Like the Richmond Basin, large-scale coal production couldn't begin in the Valley Coalfield until railroads were built to carry it. In 1849 the Virginia House of Delegates heard testimony regarding transport limitations to Montgomery County coal development, and a proposal to build a railroad to Lynchburg. Rail connections reached Montgomery County seven years later, when the Virginia & Tennessee Railroad (V&T - later part of the Norfolk & Western, established in 1876) passed to the south of Price Mountain (through Vickers) on its way from Roanoke to Bristol.

Interest in coal mining within the county ran high during the 1850s, with several companies formed not only to produce coal, but to build rail connections to the V&T. Among them

were Blacksburg Mining Co., Brush Mountain Mining & Manufacturing Co., and Southwest Virginia Mining and Manufacturing Co. Their owners' dreams were larger than life, however, and none resulted in either coal production or rail linkages.

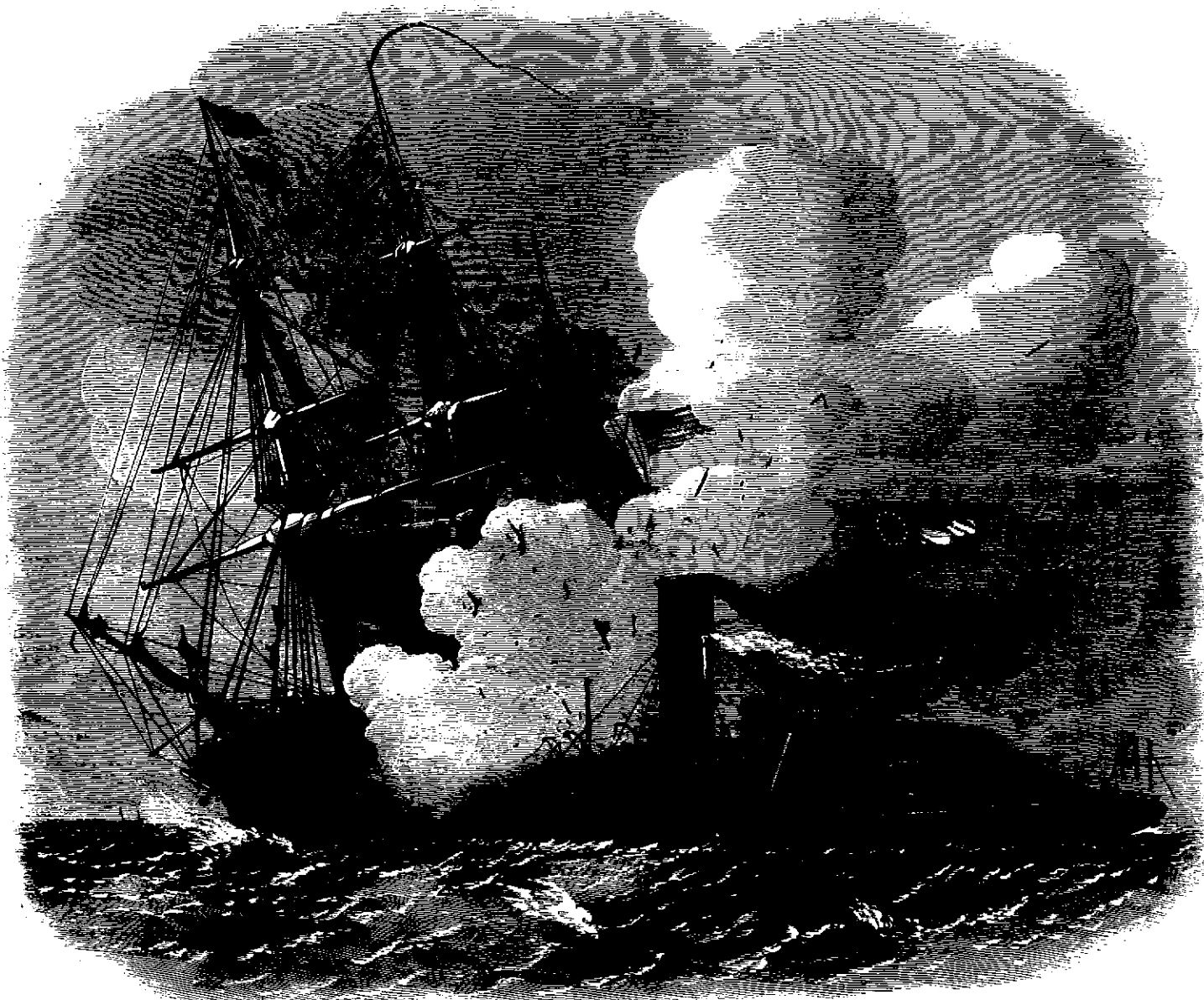
In 1853 Kyle and Montague established the Price Mountain Coal Mine Co. with a small operation on Laurel Creek. They too dreamed of building rails to the V&T, but managed only to haul their limited production by wagon to the railroad's main line at Vickers. The 1860 Census reported that Kyle and Montague produced 2,857 tons of coal valued at \$11,200 (\$3.92/ton). The same year, local blacksmiths bought 3,450 bushels (12 cents/bushel), while other residents used 6,500 bushels (probably for steam production).

Union Dissolves & Post-War Growth

With the beginning of the Civil War in 1861, mining was discontinued in Montgomery County, but soon restarted as Richmond Basin production dwindled. Coal from the Kyle & Montague Mine is said to have been used for the manufacture of shot and shell at Howardsville for the Confederate Army. By 1862 war activity had seriously disrupted Virginia rail traffic, forcing miners to haul coal from the Merrimac Mine (on Price Mountain near Blacksburg) to Buchanan by wagon, then via boats on the James River to Norfolk.

According to legend, coal from the Merrimac Mine fueled the Confederate ironclad "Virginia" (formerly the U.S. frigate, "Merrimack") in its famous battle with the Union's "Monitor" at Hampton Roads. An 1864 Confederate Army map shows a mine and a government colliery located one mile southwest of the present-day community of Merrimac that might have been the ironclad's coal source.

Following the conflict, Montgomery County coal production slowly resumed. In 1870 Cromer's Mine on Tom's Creek paid six men \$314 to produce 250 tons of coal that sold for \$700 (\$2.80/ton). By 1880 the U.S. Census reported 2,497 tons produced by 47 miners from 12 "farmer's diggings" that



The Confederate ironclad Merrimac rams the U.S.S. Cumberland. Coal from mines near Blacksburg may have fueled the ship in its famous battle with the Union ironclad, Monitor, at Virginia's Port of Hampton Roads. The above rendition was one of several depicting the Merrimac in the April 5, 1862 edition of *The Illustrated London News*. Copy from the original courtesy Allan Jokisaari, University of Idaho CartoGraphics.

sold for \$6665 (\$2.67/ton). A number of local jobbers handled coal shipments in the 1880s, including Kintzer & Schaeffer; J.H. Kipps; and Myer Bros. In 1890, 36 miners produced 5,627 tons worth \$11,400 (\$2.03/ton). By 1899, 70 miners working at 10 operations produced 20,538 tons of Montgomery County coal.

Despite low productivity with primitive hand-tool methods (averaging less than one ton/manday), transportation was the most important factor that limited coal industry growth in Montgomery County during the late-1800s. Mines were far from N&W's main line, and though attempts were made to organize capital, no feeder lines were built. In response, the McCoy family started a mining operation along the New River near the N&W main line in 1900.

Railroads & Merrimac Mine Expansion

In 1902 the Virginia Anthracite Coal & Railroad Co. (VAC&R) began construction of a rail spur to connect Blacksburg (via the Merrimac Mine) to N&W's main line at Cambria near Christiansburg. L.S. Randolph, head of Virginia Polytechnic Institute's (VPI - Blacksburg) Department of Mechanical Engineering, was in charge of the project. Though the line was only 8.9 miles in length, it took two years to build with hand tools and horse-drawn equipment.

On September 15, 1904, the VAC&R's first train completed the trip between Blacksburg and Cambria in 40 minutes at an average speed of 13 mph. Dubbed the "Huckleberry Railroad," students traveling to or from the university often left

the slowly moving train as it entered one of many long "U" turns, picked huckleberries as they crossed the fields between, then reboarded the train as it came out of the turns.

With the VAC&R in place, the Virginia Anthracite Coal Co. expanded Merrimac operations, pushing Montgomery County coal production to 21,628 tons. In addition to Merrimac production, coal from mines on Brush Mountain reached VAC&R tracks by truck. Business expanded. The company built a coal breaker with a 500 ton per day capacity at Merrimac, and the mine began producing about 4,000 tons per month (100 carloads). Besides shipments out of the county, the mine supplied coal to local blacksmiths, forges, the Kingston Iron Mine, and VPI's power plant.

The Virginian Railway (VGN) was built in 1907 to carry coal from mines as distant as Deepwater, WV, to the company's pier at Sewell's Point in Norfolk. It traversed Montgomery County north of the N&W main line through the Allegheny Tunnel (built in 1909 under present-day U.S. 460) and passed under a VAC&R trestle near the Merrimac Mine tipple, where VGN trains loaded coal for transport to Hampton Roads.

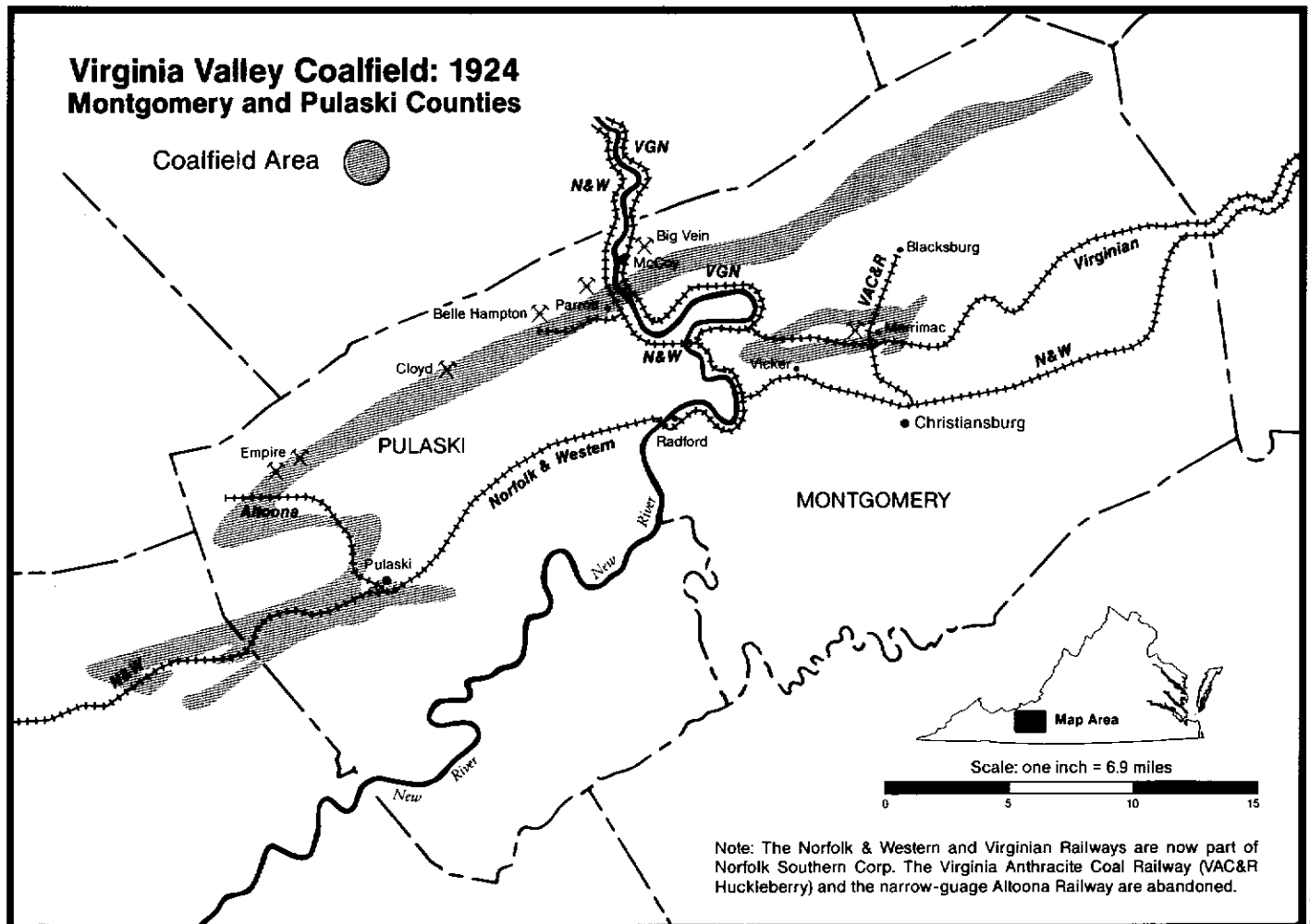
The town of Merrimac during the early 1900s claimed an older portion surrounding the Linkous Store, and a newer

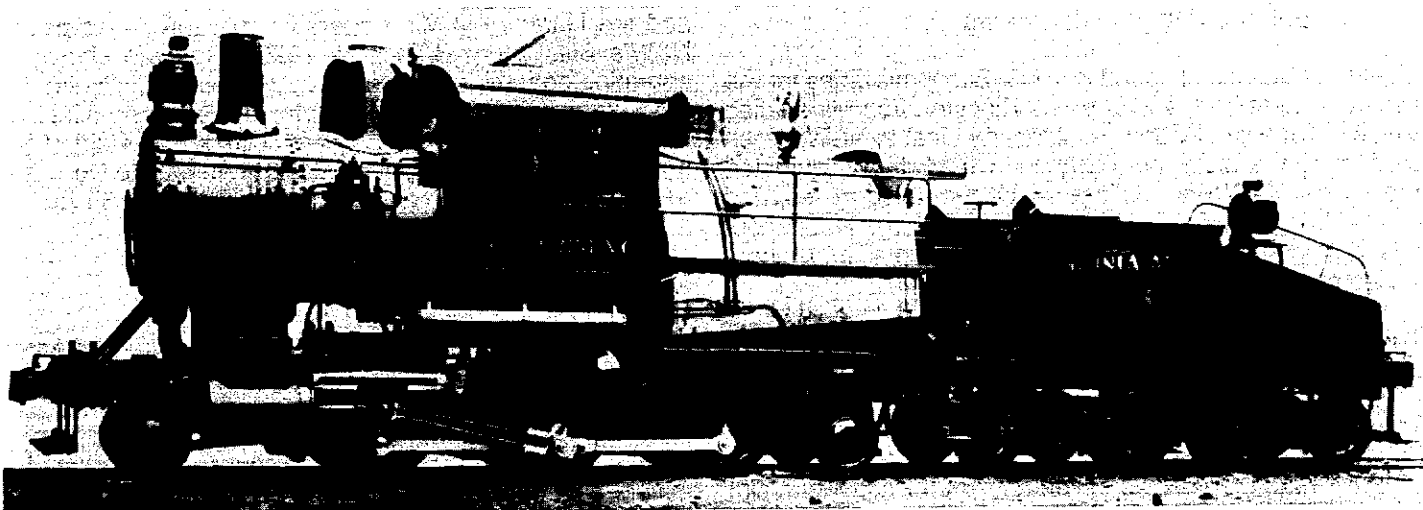
portion built for coal miners with 77 company houses and a commissary. Nearby Blacksburg was a college town of 768, and Cambria (at the N&W junction) was a village of 500 with three hotels, two grist mills, a furniture maker, and a lime kiln.

A 1907 map by T.L. Watson shows 11 coal mines in Montgomery County: seven on Brush Mountain and four on Price Mountain. The Panic of 1907 caused the VAC&R to temporarily close operations and lay off 200 employees (mostly miners). A 1908 Virginia Geological Survey (VGS) map shows 17 mines in Montgomery County.

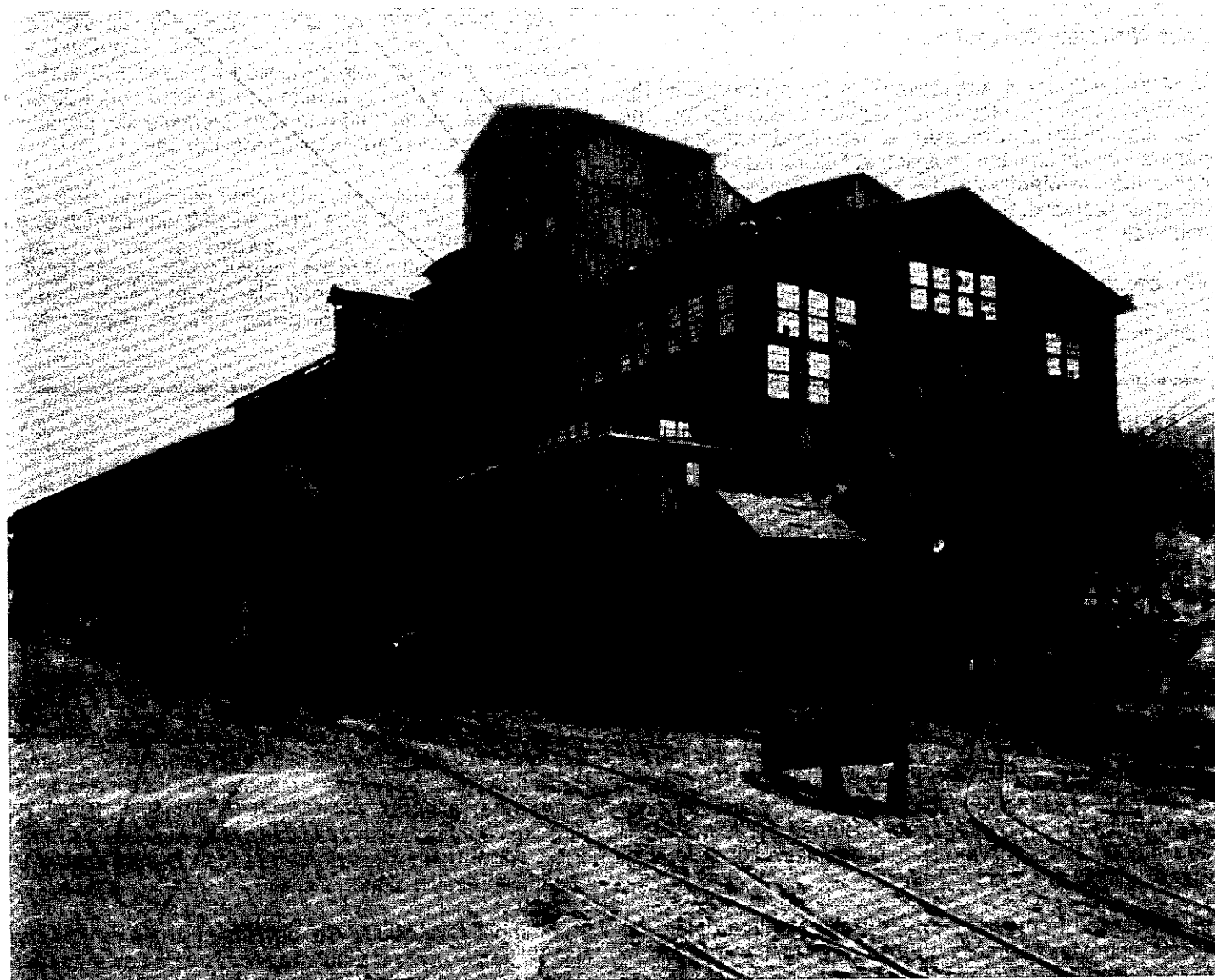
The agency's 1909-1910 Biennial Report lists the following operations in the Valley Coalfield:

- Beacham Mine/Beacham Coal Co.
- Belle Hampton Mine/Belle Hampton Coal Mining Co.
- Blacksburg Mining & Manufacturing Co.
- Brush Mountain Mine/M.C. Slusser & Co.
- Clean Air Mine/H.P. Smith & Co.
- Lick Branch Anthracite Coal Co. (one mine)
- Merrimac Mine/Virginia Anthracite Coal Co.
- Parrott Mine/Pulaski Anthracite Coal Co.
- Snider Hill Mine/H.P. Smith & Co.
- Stroubles Creek Mine/Kinzer & Sons





Above, the first locomotive used by the Virginia Anthracite Coal & Railway's "Huckleberry Line," between Blacksburg and Christiansburg (Cambria). Opened in 1904, the railway provided a key linkage between Montgomery County mines and the Norfolk & Western railroad. Below, a mid-century view of the Merrimac Mine, on Price Mountain near Blacksburg. Montgomery County coal production peaked at more than 200,000 tons during WWII. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*



Mine Troubles & New Developments

The Merrimac Mine flooded in 1909. Economic times for the company were bad, and after the Kingston Iron Mine failed VAC&R owners sold their "Huckleberry Line" to N&W, which renamed it the Blacksburg Branch in 1911. N&W liquidated the former VAC&R's holdings in the Merrimac mines, and built a "proper" railroad station at Blacksburg. Throughout this restructuring period, however, the Merrimac mines continued to produce coal.

The Slusser Mine (M.C. Slusser Coal Co.) was developed at this time where the Blacksburg-Newport Road crossed Tom's Creek. The Diamond Coal Co. also developed a mine on Tom's Creek, 3/4 mile southwest of the Slusser operation. Plunkett and Wall were operating a mine in the vicinity by 1914. A 1918 map shows seven mines on Price Mountain: Beacher; Kinzer; Kipp & Linkous; Merrimac & Brumfield; Myers & Hickman; and Price. During the same year, two mines owned by the Virginia Anthracite Coal Co. produced 79,554 tons, and two mines owned by the Price Mountain Coal Co. produced 39,440 tons.

Post-WWI Coal Operations

In 1920 the Superior Anthracite Coal Co. developed its Big Vein Mine on Brush Mountain, 1.5 miles east of McCoy. The operation included a breaker, a tram road, and a power-generation plant. Miners' housing at McCoy was considered better than at Merrimac. The following mines were active that year: Diamond; Dowdy; Keister, Price & Plunkett; Slusser; and Wall.

VPI began coal operations at Faulkner Hollow in 1923. During the same period the Virginia Anthracite Coal Co. maintained a mine at Poverty Creek on Brush Mountain,

and the Lykens Hill Mine operated near Merrimac beside N&W's Blacksburg Branch. A 1925 VGS map shows 11 operating coal mines in Montgomery County, including the Big Vein mines on Brush Mountain; the Brumfield mines on Price Mountain; Diamond; Kinzer; Linkous & Kipp; Merrimac; Price; Slusser; Superior; Virginia Anthracite Coal; and VPI. In 1928 Montgomery County yielded 116,555 tons of coal, with 61,408 tons shipped via the VGN.

Later Years

During the early-1930s, the United Mine Workers of America organized Montgomery County's largest mines. Antiquated hand mining methods were still practiced at the time — miners used picks to undercut the face, augers to bore powder holes, and shovels to load coal cars. By 1934, 400 miners struck, closing the largest mining operations in the county. The strike was non-violent and the miners remained in company houses. When the Merrimac commissary closed, local merchants extended credit to the miners, which may have caused some stores to fail.

In 1935 there were four large mines with rail sidings in Montgomery County: Beacher, Big Vein, Brumfield, and Merrimac. Together they produced between 200 and 500 tons of coal per day. In addition, there were about 20 truck mines in the county that operated intermittently, producing between two and twenty tons of coal per day.

Montgomery County coal production peaked in 1943-1944 at more than 202,000 tons, with 188,660 tons carried by the VGN. From 1914 to 1954 the railroad transported nearly 3 million tons of coal out of the county. N&W bought the VGN in 1959, and abandoned their Blacksburg Line to Cambria (the old VAC&R) in 1966, giving VPI the opportunity to extend its airport runway.

PULASKI COUNTY

Industry Beginnings & Expansion

In 1879 the Altoona Coal & Iron Co. (AC&I) built a narrow-gauge railroad to connect its mine in the Merrimac seam on Little Walker Mountain with the Norfolk & Western (N&W) at the town of Pulaski (formerly Martin's Station).

The 1880 U.S. Census reported that the Altoona Mine was the only coal operation in the county; during the same year the operation began supplying the new Bertha Zinc Works. According to the U.S. Geological Survey (USGS), the smelter burned 33,600 tons of Altoona coal in 1888. The Bertha Works purchased AC&I in 1890, which it operated continuously until 1911. The operation consumed between 25,000 and 40,000 tons of Altoona coal annually, for a total of approximately one million tons.

In 1884, coal from Hoge Tyler's Belle Hampton Mine on Cloyd Mountain was shipped via narrow-gauge railroad to Churchwood (later Belspring), then on the N&W's New River

Branch, built two years earlier. By 1888 the N&W carried 46,700 tons of coal from Vickers and Pulaski on its main line; and from Belmont, Tyler's, and Back Creek on its New River Branch. The USGS reported that the Altoona and Belle Hampton mines produced 10,379 tons of coal with 32 miners during 1895.

The fortuitous combination of coal and iron ore reserves led to the establishment of several large foundries in Pulaski County. The Pulaski Iron Co. began operations in 1888. The Virginia Iron, Coal & Coke Co. built another large foundry at Pulaski in 1899 to handle equipment maintenance for its mines and railroads, but moved to Bristol in 1900. The Pulaski Foundry & Manufacturing Co. was established in 1916. All of these operations met their demise during the Great Depression of the 1930s.

The Kimball Coal Mining Co. developed mines in 1897 near N&W's tracks north of Churchwood. The Pulaski Anthracite Coal Co. (PAC) bought their operations in 1903, and further

developed them with construction of a washing plant, homes for its miners, a commissary, and a public school. Resting at the foot of Little Walker Mountain, the mining camp took the name Parrott (after the company manager) in 1907, and PAC mines thrived there until the 1930s. The mines are gone today, but the village of Parrott survives.

A 1907 map by T.L. Watson shows six coal mines in Pulaski County: three on Cloyd Mountain, and three on Little Walker Mountain. A Virginia Geological Survey (VGS) map drafted a year later shows 11 mines. The High Carbon Coal Co. maintained operations near Draper Mountain, and the Pulaski Smokeless Coal Co. mined coal at its Gunton operation near the Wythe County border. The Cloyd Mine, near the Dublin-Pearisburg Road, had begun operations before the turn of the century, supplying a forge on the nearby David Cloyd Kent farm.

The Empire Mines

In 1914, Gray Langhorne (an heir of David Kent) began a wagon mine operation after striking "a vein of pure anthracite" said to rival Pennsylvania coal in quality. In 1919 the Virginia Anthracite Coal Co. (VAC) leased the mine (later known as the Empire #1) with Langhorne retained as a company director.

Large investments in equipment rapidly increased mine output to 180 tons/day. The company bought 4.5 miles of Altoona's narrow-gauge (3') tracks to a point called Weldon's, and in 1920 extended them an additional four miles to the Empire #1 operation. The VAC went bankrupt in 1921, and was reorganized as the Empire Anthracite Coal Co. (EAC). The firm opened an additional mine (Slope #2) and made substantial operational improvements, including an electric hoist, ventilation fan, machine shop, tipples, store house, and stables.

Empire's mining method was room-and-pillar (50-foot room centers separated by 30-foot pillars), with lateral mule haulage of 600 tons per day. Water was pumped from the mines at a rate of 123 gallons per minute, or 0.6 tons of water per ton of coal. EAC's railway hauled mine production with three "saddle-back" locomotives and 35 cars to N&W's main line at Pulaski, where the company maintained a coal breaker, screening plant, briquette operation, and management offices. The Southwestern Virginia Railway Co. was formed in 1925 to operate EAC's narrow-gauge rail system.

EAC miners were non-union and mostly native Americans. They made "very good money," 55 cents per hour or \$1 for every 1.7 ton car they loaded. The EAC mining village was better than most in the Valley Coalfield, claiming 55 "comfortable" houses, and a boarding house for 35 men. A large commissary provided the necessities of life, with an average 20 percent markup. Water supplies were "good quality."

In 1926 the Virginia court system placed EAC into receivership, with operations conveyed to the Old Dominion Anthracite Coal Co. The new firm, however, failed to pay rents and royalties, leading to repossession of company properties by the Kents and Langhorne. Gray Langhorne formed the Anthracite Coal and Briquetting Co. in 1931, but its 1938 failure permanently closed the former Empire Mines.

VALLEY COALFIELD EPILOGUE

Mines in the Valley Coalfield gradually lost markets to the far richer operations that had been under development in Southwest Virginia since the late-1800s. The region's geology had always made mining difficult, with Brush Mountain coal dipping 30 degrees to the south and Price Mountain coal 30 degrees to the north. The Virginia Division of Mineral Resources estimated the region's resources of Mississippian Age semi-anthracite coal at approximately one billion tons.

Because the USGS and the U.S. Bureau of Mines often combined production totals with those of other Virginia coal counties, total output from Montgomery and Pulaski counties is uncertain. It is estimated that the Valley Coalfield produced a total of 6.26 mt of coal during its history, with Montgomery County contributing 4.37 mt, and Pulaski County 1.89 mt.

Coal mining is no longer a factor in the economies of either Montgomery or Pulaski counties — both now rely on agriculture, education, and manufacturing. Dense vegetation has swallowed Pulaski County's coal mines, and only broken foundations offer evidence of Merrimac's company houses and commissary. A reining operation salvaged limited amounts of coal from gob piles at the old Merrimac Mine site during the late-1980s, cleaning it in a shaker for shipment to a North Carolina charcoal briquette operation.

Southwest Virginia Coalfield

TAZEWELL COUNTY

Early Coal Use

Tazewell County was formed by an act of the Commonwealth General Assembly in 1799, and named for U.S. Senator Henry Tazewell. The new county's borders surrounded 696 square miles of timber and farmland, with coal deposits lying in a narrow strip along the northern border.

In 1873, Captain I.A. Welch surveyed the timber and mineral value of the Wilson-Cary-Nichols grant along the Bluestone River in northeast Tazewell County. He reported that blacksmith Jordan Nelson was using coal from a 13-foot outcrop near his cabin on Laurel Creek. Nelson, however, was not the first to use the coal — he purchased his land in 1866 from another blacksmith, Andrew Stowers, who had obtained it by land grant in 1851. Welch subsequently traced the seam from Nelson's outcrop down the valley of the Bluestone River.

There were no roads in the area, and a jungle of hemlock and rhododendron in valley bottoms was almost impenetrable. Even so, coal was carried by horseback from the Nelson outcrop across the mountains to consumers not only in Tazewell County but as far away as Bland County; and Mercer and McDowell counties in West Virginia. The price was a penny/bushell!

Railroads Start Coal Industry

In 1880, the Southwest Virginia Improvement Co. (SWVIC) was established to purchase options on 100,000 acres of choice coal lands in Tazewell County, mine the coal, and (by charter) build a railroad. Representing the SWVIC, Joseph Doran bought 406 acres from Jordan Nelson for \$1,932, and mineral rights to an additional 500 acres for \$4,000.

By 1881, the Norfolk & Western Railroad (N&W) took interest in Tazewell County's substantial high-grade coal deposits as a source of locomotive fuel. Another factor was competition — in 1873, the Chesapeake & Ohio Railroad (C&O) started moving coal from nearby West Virginia through Cov-

ington to Richmond. In late-1881, N&W purchased right-of-way from the New River Railroad (chartered in 1872), which it later called the New River Branch. Laborers immediately began laying track from Radford toward Tazewell County's coal deposits.

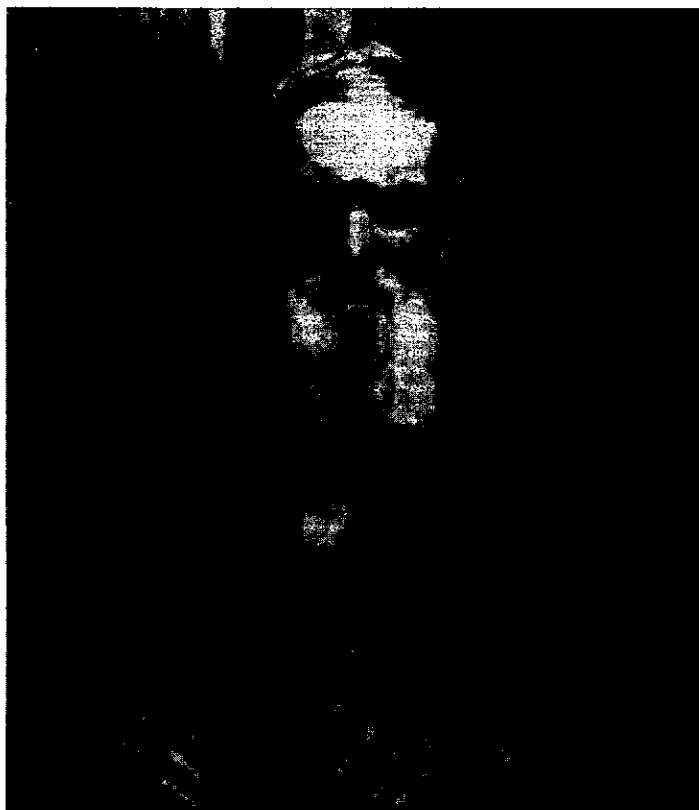
Large-scale coal mining began at Powell's Bottom a year before the N&W reached Tazewell County. Before the action started, the area's only hint of civilization was a cabin, tobacco field, and cornfield owned by William Butt. In January 1882, 200 Hungarian, Swedish, and German immigrant miners recruited at Castle Garden, NY journeyed to Powell's Bottom. Most of their nine-day trip, however, was spent on the primitive road from Wytheville, 40 miles to the south.

The miners promptly set up camp near the Nelson outcrop and started developing entries that would become the Baby Mine, the region's first large-scale coal operation. During the first few months of work, the men stockpiled 40,000 tons of coal that awaited N&W's 1883 arrival. The mine's main entry (which ultimately led to the 1st East, 2nd East, and West Mines) was later driven into a hillside near Coal Branch Creek, a mile from the miners' camp.

On June 30, 1882, the camp's name was changed from Powell's Bottom to Pocahontas, honoring the Indian princess who figured prominently in Virginia history. At the same time, a sawmill to provide lumber for company housing and offices was established about ½-mile from camp in Laurel Creek valley.

The N&W completed the New River Branch from its main line to Pocahontas on March 10, 1883. The first mines in the area were owned and operated by SWVIC, which contracted N&W for transport. In return, the railroad received approximately 70 percent of the coal's delivered price. Mine-mouth price in 1883 was 85 cents/ton, and on delivery to the East Coast sold for \$2.60/ton.

The railroad used the first carload of Tazewell County coal as locomotive fuel, but SWVIC management consigned the



Blacksmith Jordan Nelson owned the land that would become the site of the famous Pocahontas Mine. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*



The 13-foot thick coal outcrop that first brought railroads and industry to Southwest Virginia. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*

second to the mayor of Norfolk at Virginia's Port of Hampton Roads. The rail car was decorated, with a seat from which the mayor could distribute Tazewell County coal to the people of the port city. As the coal arrived on March 17, 1883, a resounding salute by the Norfolk Light Artillery Blues inaugurated the Southwest Virginia coal industry. Later that year, the C&O opened a coal export pier at Newport News — followed by N&W construction of its famous Pier #1 at Norfolk in 1884. Little Virginia coal was exported during the early years of the industry; most was shipped "coastwise" to domestic consumers.

Not only coal mining, but coke production began in earnest with the arrival of the N&W at Pocahontas. A coke plant built there in 1883 claimed 200 ovens and produced 25,340 tons during its first year of operation.

In 1886, the SWVIC's Pocahontas mines produced 639,751 tons of coal. Of this amount, 539,409 tons were shipped raw, and 93,550 tons as coke. Coal delivered to Norfolk piers brought \$2.35/ton, and coke \$2.85/ton. N&W set up the Pocahontas Coal Co. in 1888 as a trade agent, but was forced to divest in 1895 after West Virginia passed a law forbidding railroads to sell coal. A second mining company, J.S. Browning, established competitive operations west of Pocahontas in 1894 (Big Vein Mine).

Royalties paid to surface owners above these early coal operations were 12.5 cents/ton for the first 10,000 tons, 11

cents/ton for the next 15,000, and 10 cents/ton for amounts above 25,000 tons. Coal production cost the mining companies about 65 cents/ton, and sold at the mine for 80 cents/ton. Coke cost was \$1.35/ton (72-hour bake), with prices ranging from \$1.49 to \$1.73/ton.

Coal Mining Boom Towns

With Tazewell County's first coal loadings in 1883, N&W brought industry — and civilization — to the Southwest Virginia wilderness.

By July 1883 the town of Pocahontas boasted a company store, home milk delivery, a bowling alley, dressmaker, liquor store, newspaper, ice house, school, chapel, and even a brass band. SWVIC built two-story houses for its miners and their families. Sanitation was primitive, with privies set above storm drains that emptied into Laurel Creek and the Bluestone River. Samuel Litz's meat market sold miners whole chickens for a quarter, beef for 6 cents/lb, butter for 20 cents/lb., and eggs for 10 cents/lb. After openly buying votes with cash and commodities, the first mayor of Pocahontas was elected in 1884.

Southwest Virginia's early coal miners were heavy drinkers. Before the General Assembly granted licenses in the area, liquor was sold at "blind tigers" where miners inserted a quarter into a slot for a drink of uncertain quality — delivered by a hand of uncertain origin. After liquor licenses were



Above, an experimental coke oven at Pocahontas, circa 1890. Man standing second from left is Jenkin Jones. At extreme right is John Cooper, pioneer Pocahontas coal operator. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg)*. Below, members of the West Virginia Mining Institute tour the Pocahontas Mine in 1904. Standing second from left is Mine Manager William Lekie; fifth from left is Pocahontas Collieries Co. President James Elwood Jones. *Picture courtesy Fred Duff (Bluetfield, WV)*.



granted, three breweries set up operations at Pocahontas, including Anheuser Busch, Pabst, and Virginia. Saloons (23) were counterbalanced by churches of almost every Christian denomination.

In 1891, the town of Richlands was incorporated in western Tazewell County and developed by the Clinch Valley Coal and Iron Co., which built a rolling mill and glass works. Like Pocahontas, Richlands was a boom town, with attendant saloons, wild spending, brawls, and crime.

Early Mining Methods

Miners opened entries and tunnels, laid track, placed timbers, and ran coal cars to the "breast," or mine face. Large, stationary "steam donkeys" lifted coal upward through shafts to the surface, where gravity fed the coal downhill to cleaning plants and railcar loading towers called tipples.

The men first undercut coal seams with picks, then bored blast holes with hand augers. Explosives were tamped into these "sugar holes," then shot with a fuse made of black powder and sulfur called a squibb. The broken coal was hand-loaded into mine cars that were pulled by mule to an oak-timbered tipple, where men and boys hand-picked slate from the coal, discarding waste into a pile that often caught fire. Tipples were often surrounded by blacksmith, machine, and mine car repair shops.

Miners were paid by the amount of coal they moved, receiving 75 cents for each 2-ton car (80 cubic feet). After paying 50 cents per month for tool rental, and purchasing explosives and oil (a company ploy to maximize worker efficiency and avoid theft), an average miner's net pay was 50 to 60 cents per loaded car. Boys driving mules through mine tunnels earned \$1/day; track and timber layers \$1.85 to 2.20/day; dumpers \$1.40/day; laborers \$1.27 to 1.40/day; and coke-drawers 55 cents/day.

Underground coal production was risky during the early years of mining in Tazewell County, with a number of disasters taking their toll. In 1884, a huge explosion in the Pocahontas East Mine killed 114. A fire took the lives of nine men in 1904 at the Pocahontas Baby Mine. An explosion at the Pocahontas West Mine in 1906 killed 36 miners and 11 mules.

Labor Unrest

Pocahontas area mines suffered their first labor strike in 1895, agitated by "Mother Jones" union organizers who had already closed several operations in West Virginia. General Coxey carried the union appeal. To maintain law and order, Virginia Governor Charles O'Ferrell sent militia from several cities, including the "Richmond Blues." Upon their arrival, with white plumes waving, a company of soldiers marched up Center Street in Pocahontas. For three months troop commander Major Simonds maintained order with martial law and a Gatling gun on Tank Hill. Mining companies at Pocahontas subsequently hired the Baltimore-Felts Detective Agency to maintain law and order and infiltrate the miners' ranks, reporting potential labor problems.

Since this early organized labor conflict and the beginnings of the United Mine Workers of America (UMWA), Tazewell County followed a general pattern of union membership gains (especially during the 1930s), strikes, and decline in union power during the past 30 years. The UMWA remains a powerful force in Southwest Virginia, however, and was instrumental in raising wage rates, improving safety, and assuring retired miners of adequate income.

Early 20th Century

Pocahontas was the largest town in Tazewell County at the turn of the century, followed by Richlands and Raven to the west. With a population of 4,000, Pocahontas claimed "prosperous and contented workers of nearly every race and nationality." Citizens enjoyed free schools, churches, lodges, and fraternal societies.

By 1904, Pocahontas Collieries (formerly SWVIC) boasted four mines (1st East, 2nd East, Baby, and West), 400 dwellings, a machine shop, car shop, power station, water works, electric light plant, supply store, commissary, and a cold storage plant. The G.L. Boissevain Co. opened a 189-foot deep shaft mine a few miles west of Pocahontas that year, and established a company town that offered a church, store, and comfortable dwellings with electricity and a developed water system — all on high ground for improved sanitation. County coal production in 1904 was 872,000 tons (1,088 miners).

Tazewell County claimed a few graded, "improved" roads at the turn of the century, and a thoroughfare that extended between Boissevain and Jenkinjones, WV. A company description of the area touted: "The elevation is ideal for health, and steady employment is available at highest rates all year long for good miners and coke men." Local farmers produced corn, garden vegetables, and hogs.

A 1908 Virginia Geological Survey (VGS) map of Tazewell County showed 16 coal mines: four near Pocahontas and twelve under a variety of ownership near Richlands:

- Big Vein Mines, Big Vein Mining Co.
- Browning Mine, J.S. Browning Co.
- Seaboard Mine, Empire Coal and Land Co.
- Boissevain and Pocahontas Mines (SWVIC changed its name to Pocahontas Collieries in 1901, then to Pocahontas Consolidated Collieries Co. after acquiring Boissevain in 1907).
- Red Ash Mine, Raven Red Ash Coal Co.
- Richlands Mine, Richlands Coal Co.
- Coal Creek Mine, Virginia-Tennessee Coal Co.
- Clinch River Mine, Clinch River Coal Co.

Increased coal demand during WWI pushed Tazewell County coal production to more than 1.6 million tons (mt) by 1918. The VGS identified 21 coal mines in the county during 1919. By 1929 production had grown to 2.8 mt, with ten coal companies operating 16 mines. Other industries operating in the county that year included lumber, textiles, food, processing and farming. Miners numbered 2,366, while agriculture employed 1,567, and alternate industries 556.

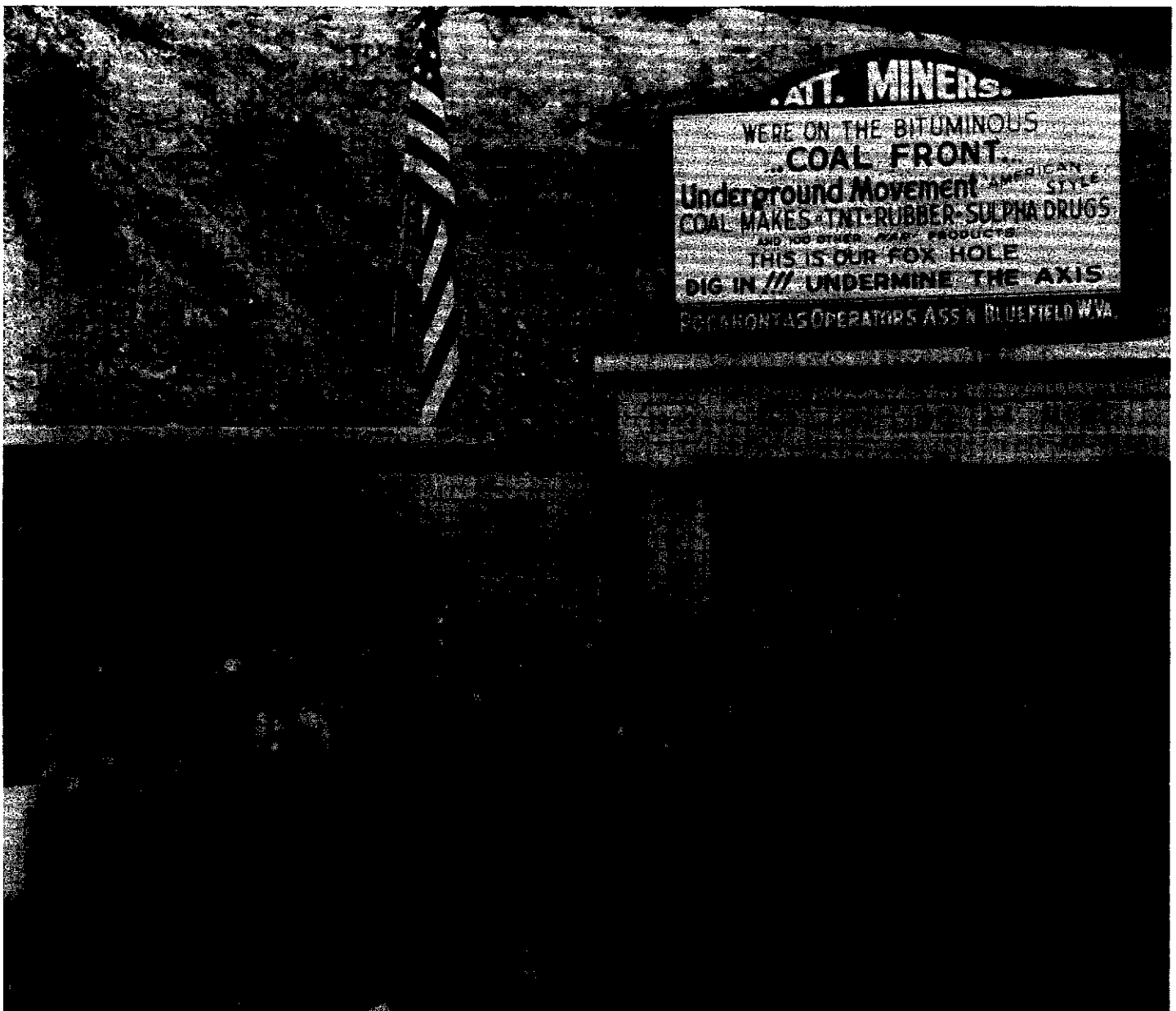
Tazewell Coal Industry Decline

Tazewell County production peaked in 1943 at 4.8 mt (4,552 miners), but coal's economic dominance was nearing its end. Many mining companies closed during the volatile market period that began in the 1950s. After 72 years of operation, the Pocahontas #1 Mine was retired in 1955 with a total production of 44 mt from the Pocahontas #3 seam. County coal output had fallen to less than three mt that year.

The U.S. Census revealed a 1970 county population of 39,816. Mining employment that year was 309, with production at 1.1 mt. By 1980 Tazewell County claimed a population of 50,511, the largest in the Southwest Virginia Coalfield. Mine employment had more than doubled to 786,

with production at 2.2 mt. Yet the days when coal provided vast riches to Tazewell County are gone, its economy now dominated by agriculture (mostly beef and dairy cattle). With nearby coal reserves depleted, the town of Pocahontas claimed a population of only 700 in 1980 (compared to 4,000 in 1904). Richlands is now the largest town (pop. 5,800), followed by Tazewell (county seat, pop. 4,460).

Tazewell County's principal coal producer today is the Jewell Ridge Mine, operated by Pittston Coal Group. In 1988 coal mine employment reached 687, with a production of 3.15 mt. Though well above the county's low of 240,000 tons in 1964, output still trails WWII's peak production years. Tazewell County mines produced a total of 196,786,857 tons of coal from 1882 through 1988.



"Miner's Foxhole," the Bishop Mine in Tazewell County, September 1944. Miners inspired by overseas victories placed this sign above the mine entry exhorting themselves to step up coal production. *Craft Memorial Library/Eastern Regional Coal Archives (Bluefield, WV).*

WISE COUNTY

Early History and Coal Reserves

Responding to popular petition the Virginia General Assembly voted to establish Wise County in 1856, naming it in honor of Governor Henry Wise. With a population of 250, Gladeville was designated the county seat (renamed Wise in the 1920s). During the county's early years, agriculture was the principal livelihood. According to the 1860 U.S. Census, hogs outnumbered the human population of 4,508. The 1870 census noted 39 square miles of agricultural land, with 678 farms.

The first Wise County coal ventures were along Tom's Creek and Crab Orchard Creek. The few tons mined from these primitive operations were used primarily by local blacksmiths. Geologist J.P. Leslie and mining engineer Major Jed Hotchkiss reported "good quality" coal near Gladeville in the 1870s. General J.D. Imboden promoted coal and iron ore mining in Wise County to the Virginia Coal & Iron Co., prompting acquisition of 25,000 acres in 1882. But coal production remained low until railroads reached the county — only 188 tons were mined as late as 1889.

Coal Industry Beginnings

In 1887 the Norfolk & Western Railroad (N&W) began construction of their Clinch River Branch to reach Wise County's iron and coal deposits. From Bluefield, VA the new line traversed Tazewell and Russell counties to St. Paul at the county's eastern edge, continued through Coeburn (named for W.W. Coe, N&W president) and by 1891 reached Norton

(named for Ekstein Norton, president of the Louisville & Nashville Railroad - L&N).

Norton was also reached that year by the L&N, which penetrated Wise County from Harlan, KY through the Cumberland Gap via Lee County's town of Pennington Gap. The L&N brought rail service to the town of Appalachia and additional rail traffic to Wise County's town of Big Stone Gap, already served by the South Atlantic & Ohio Railroad (SA&O). Formerly the Black Mountain Railroad, the SA&O was built from Bristol, VA to Big Stone Gap in 1890 by the Virginia Coal & Iron Co. Even before large-scale coal mining began, railroad construction expanded Wise County population by almost 1,500 — to 9,345 in 1890.

The first coal shipped from Wise County (on the SA&O) was mined in 1892 by the Virginia, Tennessee, and Carolina Steel & Iron Co., from drifts near Looney Creek. Competing coal companies based in Norton (Robert Fleming Coal Co.), Banner (Virginia Coal Gas Co.) and Virginia City (Russell Creek Coal & Coke Co.) opened mines during the same year. After corporate reorganization in 1898, the SA&O became the Virginia & Southwestern Railroad (VA&SW). New track construction by the VA&SW reached westward to neighboring Lee County's Black Mountain mining district, Imboden, St. Charles, and "The Pocket," a distinctive topographic feature and mining district.

During the early years of Wise County mining, the Virginia and Tennessee Coal & Iron Co. leased land to a number of companies, including Kentucky Coal & Iron Co., Clinch Val-



Original entry of the Derby Colliery shortly after the turn of the century. *Picture courtesy Bill Hendrick (Big Stone Gap, VA).*

ley Coal & Coke Co., Coeburn Coal & Coke Co., and Wise County Coal & Coke Co. Another large coal owner at the time was Stone Gap Colliery, which controlled 8.5 million tons of coal reserves underlying 1,000 acres near Big Stone Gap.

Wise County's coal industry grew rapidly, claiming 13 coal mines in 1893, where 260 miners produced 126,216 tons of coal that sold (at the mine) for 90 cents per ton. The county's coke industry began in 1894, and within two years the Virginia Iron, Coal & Coke Co. operated 500 coke ovens at Stonega. The Tennessee Coal & Iron Co. built coke ovens at Tom's Creek in 1897 and 1898. By 1897, 818 miners produced 712,011 tons of coal, surpassing Tazewell County production by 8,673 tons. During the same year, 300 unorganized miners walked off the job for 30 days at the Tom's Creek Mine.

With railroad construction and the expansion of coal mining operations during the 1880s and 1890s, Wise County's population more than doubled — to 19,653 by 1900. Miners numbered 2,633, with coal production at 1.36 million tons (mt). During the same year the U.S. Census recorded 12 mining companies, 50 manufacturing operations, and 1,196 farms.

Important Railroad Connections

"Feeder" railroads were integral to the development of Wise County's coal industry, connecting remote mines to new main line rails. To reach coal mines near the town of Wise, the Virginia & Kentucky Railroad (VA&KY) laid track from Norton in 1902. During the same year, the Lick Creek &

Lake Erie Railroad was built from St. Paul northeast to reach mines at Dante. By 1903, the Chesapeake & Ohio Railroad (C&O) built a feeder line southeast from Pikeville, KY to reach mines near Pound in northern Wise County.

Built by the Virginia Coal & Iron Co. the most important of these feeder line railway systems was the Interstate Railroad, which connected with the VA&KY and the N&W at Norton. From Norton west, the Interstate connected with the L&N at Appalachia in 1905, with short branch lines to mines near Stonega and Pardee. By 1907, an Interstate spur reached mines near Glamorgan.

The Carolina, Clinchfield & Ohio Railroad (CC&O) purchased the Lick Creek & Lake Erie Railroad in 1908, and a year later extended tracks southward through Scott County to Spartanburg, SC. This construction effort connected the CC&O with the Interstate at Miller's Yard (a large rail marshalling area in Scott County) and the main line of the Southern Railroad near the Tennessee border.

Served by an integrated rail system, the county claimed 31 mines by 1908, including five owned by Stonega Coke & Coal, and eight owned by Virginia Iron, Coal & Coke. Wise County coal reached distant markets with the help of seven railroads: N&W, L&N, VA&SW, VA&KY, C&O CC&O, and the Interstate. Miners numbered 3,324 that year, with coal production at 2.6 mt.

The Miner's Life

Depending on the character of the deposit, coal seams in Wise County mines were often not undercut during the early



Built by the Virginia Coal & Iron Co. (later Westmoreland Coal), the most important "feeder" railway in the Southwest Virginia Coalfield was the Interstate, which connected with the Virginia & Kentucky Railroad and the Louisville & Nashville Railroad at Norton. *Harry W. Meador Coal Museum / Westmoreland Coal Co. (Big Stone Gap, VA).*



Coke ovens operated by the Norton Coal Co., 1931. For much of the century Virginia coal was in great demand by the steel industry. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*

years of the industry, but blasted directly from the mine face, or "shot from the solid." Three seven-foot deep holes were hand augered near the base of the exposed coal seam, then filled with black powder in rolled cartridges two inches in diameter and up to three feet long. After the explosion, miners shoveled broken coal into cars drawn from the mine by mules. The 1900 U.S. Census put Wise County's mule population at 494.

Underground air circulation methods were primitive. A large fire built at one mine entry drew air through the mine from an entry at the opposite end. When miners faced tunnels filled with methane, the fire boss walked through the mine until he reached the point where a match would ignite the gas. The resultant flame "rolled" through the tunnel, burning out the methane. After a short period of ventilation, the mine could be worked until the next shift.

Company towns were ethnically and racially segregated. The town of Stonega (built by Stonega Coal & Coke in 1893) supported three different communities: Immigrant Town, Black Town, and American Town. Each maintained separate facilities, organizations, customs, and social life. Built by Stone Gap Collieries in 1898, "main town" Glamorgan was populated primarily by local families of American descent. A group of hard-working immigrants (Austrians, Bohemians, Slovaks, Poles, Italians, and Russians) lived at the top of adjacent "Hunk Hill" in twenty two-story buildings that housed two families each. The immigrants erected a Catholic church for a priest who traveled monthly from Stonega to Glamorgan.

By 1910, Wise County population had reached 34,162 (4,449 miners). With coal production booming during and after WWI, population surged to 46,500 by 1920 (6,894 miners). Farmland covered 78,000 acres (30% of county area) and though agriculture provided most jobs, it could not offer incomes comparable to coal mining. Farm products included corn, wheat, alfalfa, oats, apples, cattle, hogs, horses, sheep,



Prior to widespread mechanization in the 1930s, mules provided the power to haul coal from Southwest Virginia coal mines. *Craft Memorial Library/Eastern Regional Coal Archives (Bluefield, WV).*

and poultry. Though once a major county industry, lumbering was in decline.

With a population of 3,068 in 1920, Norton was Wise County's largest town, followed by Big Stone Gap (3,009), Appalachia (2,036), Wise (county seat, 1,071), Coeburn (884), and St. Paul (574). By 1923 the county claimed 36 coal mines. Most county land (2/3) was owned by four large coal companies: Stonega Coal & Coke; Virginia Iron, Coal & Coke; Clinchfield Coal Co.; and Virginia Coal & Iron (now Penn Virginia Resources Corp.).

The Great Depression of the 1930s put many Wise County coal miners out of work. Mine employment declined from 5,462 in 1928 to 3,268 in 1933 (40%). Though President Roosevelt's Works Progress Administration (WPA) offered some employment in Southwest Virginia during the 1930s, laid-off miners across the region disliked government-subsidized jobs. To avoid the WPA's low paying, make-work projects, some enterprising miners took up moonshining. In St. Paul alone there were 15 "bootleg" drinking establishments, where corn whiskey sold for 25 cents per tumbler and \$4 per gallon.

As early as 1909, Wise County coal mines had begun to

mechanize with electric locomotives and under-cutting machinery. Though the Great Depression stifled coal demand and forced mine closures, mechanization continued and productivity increased after 1930. New electric loading machines snatched coal from mine floors while shuttle cars carried it to belt conveyors. Before mechanization, miners averaged 1.5 tons/manday; by 1935 productivity had climbed to 3.9 tons/manday.

Boom and Bust Since WWII

With the onset of WWII, prosperity returned to Southwest Virginia. During the late 1940s coal profits increased, prompting a mining boom across Central Appalachia. In 1943, a Piggly Wiggly supermarket opened in Norton, the first store under national franchise to set up shop in the Southwest Virginia Coalfield. In 1944 Wise County claimed the region's first surface coal mining operations.

County coal production reached 5 mt during 1947 (4,153 miners), but by the mid-1950s losses of lucrative transport and residential heating markets to oil and natural gas forced industry-wide lay-offs. Many miners turned to low-overhead, low-paying, non-union truck mines. The number of mines operating in Wise County alone mushroomed from 60 in



"Bone pickers" hand cleaning coal at the Virginia Iron, Coal & Coke tipple, Tom's Creek, Virginia, 1931. Such labor-intensive cleaning methods were gradually replaced by crushing, shaking and washing equipment. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*

1951 to 300 by 1955! The largest coal companies operating within the county that year were Stonega Coke & Coal; Sunrise Coal; Virginia Iron, Coal & Coke; Coal Processing; and Wise Coal.

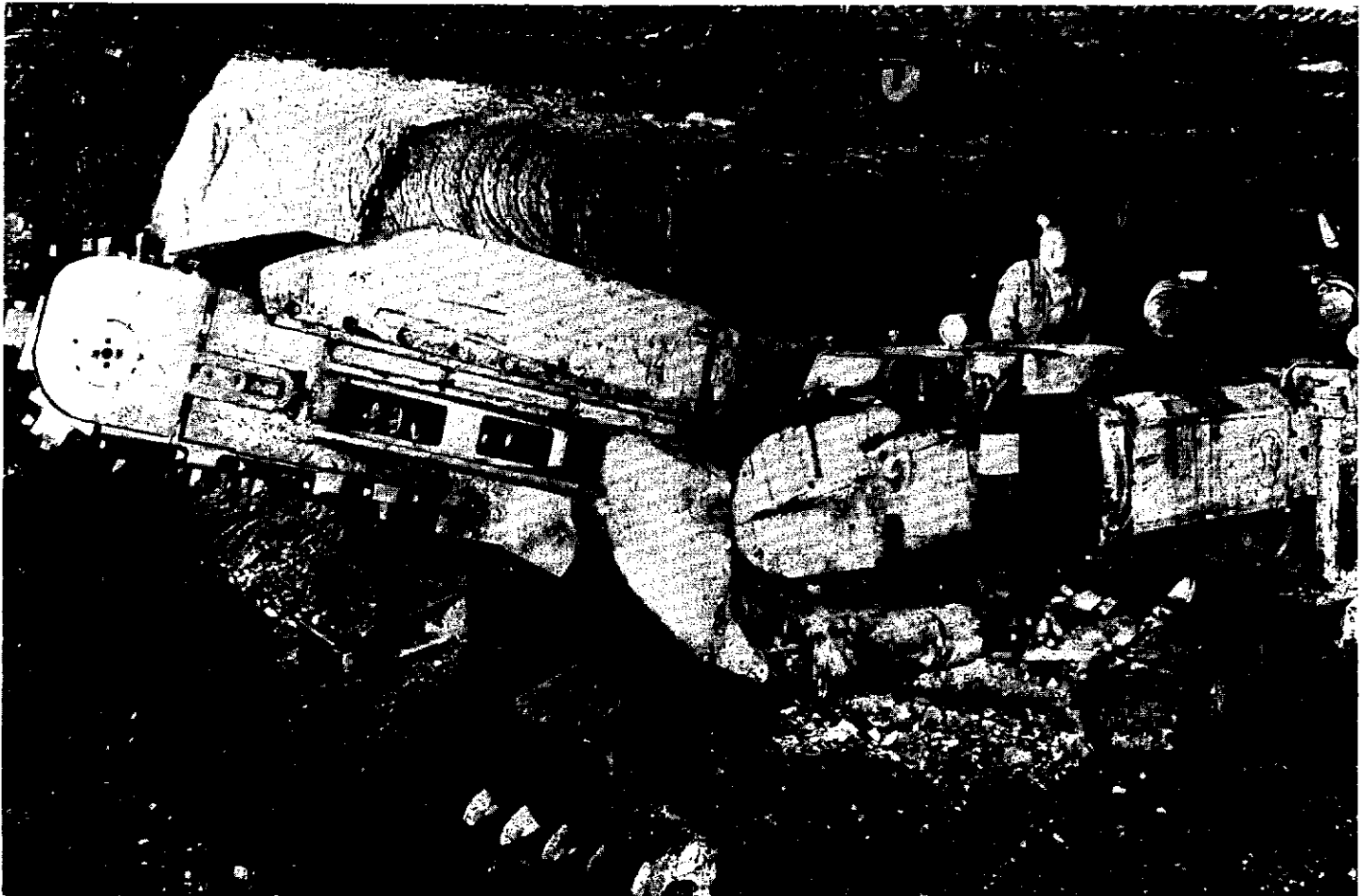
To meet continuing market challenges since the 1950s, coal companies operating in Wise and other counties began introducing continuous mining equipment and other machinery to their operations. The result was steadily rising productivity: from approximately five tons/manday in Wise County mines during 1950 (production 4.9 mt) to nearly 10 tons/manday by 1960 (production 5.5 mt), and again to nearly 20 tons/manday by 1970 (production 8.4 mt). During the same period, mine employment declined from 4,981 in 1950, to 2,659 in 1960, and to 1,846 by 1970.

County population had been relatively constant between 1930 and 1950, up only 5,169 (to 56,336). But with coal industry labor force reductions, population fell as unemployed miners moved north to find work in Midwest factories. By 1960 coal market losses were nearly complete, prompting business closings and an unemployment rate of 15.6 percent. Between 1960 and 1963 the county's number of employed miners fell 18 percent (from 2,658 to 2,168), while county retail employment dropped 40 percent.

The tide turned in 1963 as the United States started a decade of renewed economic growth. Wise County coal production reached 6.1 mt, and rose steadily. At the peak of U.S. steel production in 1971, high demand for Wise County's premium-grade coking coal brought unemployment down to 8.6 percent, with 23 percent of workers in the mining industry. Coal production in 1971 reached 8 mt (1,825 miners).

According to the U.S. Census, Wise County population in 1980 was 43,863 (down 22% from 1950). Coal production reached 12.5 mt that year, with 3,805 miners averaging 26.4 tons/manday. Longwall mining machinery introduced in some mines since the mid-1980s has maintained county production, productivity, and safety in the difficult mining conditions presented by ever-deeper underground operations.

Wise County coal production and shipments peaked in 1985 at 14.1 mt from 195 mines, yet county unemployment was 12 percent the following year. Principal operators were Westmoreland Coal Co.; ANR (Virginia Iron, Coal & Coke); Pittston Coal Group; Pardee Coal; and Glamorgan Coal. By 1988, Wise County coal production had declined to 12.4 mt. Mine employment was 2,845, some 43 percent lower than the 1950 high of 4,981. Wise County mines produced a total of 769,219,269 tons of coal from 1892 through 1988.



To meet continuing market challenges, companies operating in Wise and other Southwest Virginia coal counties began introducing high productivity continuous mining equipment during the 1950s. At 10 tons/manshift by 1960, Wise County coal mining productivity was double that of 1950. *N&W Railway Archival Collection - VPI&SU Libraries (Blacksburg).*

RUSSELL COUNTY

Early History

Russell County was formed in 1786 from part of the then-larger Washington County. Named in honor of General William Russell (brother-in-law of Patrick Henry), its original extent contained much of Virginia's seven modern coalfield counties. Today, Russell County covers 496 square miles, with 84 square miles north of the Clinch River within the Southwest Virginia Coalfield.

Early residents lived by hunting, farming, and barter. Called the "Mountain Empire," and later "Virginia's Blue Grass Empire," Russell County's first and foremost industry was agriculture. Farmers produced vegetables, corn, hogs, milk, and butter for local sale. Tobacco and beef cattle were later established for export to other areas. Lebanon (named for the "Cedars of Lebanon"), was incorporated near the county's geographic center in 1819. Towns also sprang up at Dickensonville, Elk Garden, Castlewood, and New Garden.

Initial Coal Development

Coal was discovered during the 18th century, but as in other Southwest Virginia counties mining was limited until major railroads arrived. In 1889 coal production was a meager 402 tons, mined for farm fuel. After the Norfolk & Western Railroad (N&W) passed through Russell County in 1890, towns were established at Cleveland and Honaker (formerly New Garden). N&W construction brought new people to the county, with 1900 population at 18,031 (compared to 10,500 in 1860).

A small amount of coal was shipped in 1901, but Russell County's coal industry didn't take off until 1902, when the Dante #1 and #2 mines were developed near Turkey Foot on Lick Creek. Both were reached by the Carolina, Clinchfield & Ohio Railroad (CC&O) from N&W's main line at St. Paul. The Clinchfield Coal Co. opened two additional mines in 1904, the same year that 381 miners produced the county's first significant amount of coal — 158,000 tons. Both the CC&O and Clinchfield Coal were then owned by Cumberland Corp. of Virginia, a New York holding company.

Mining Expansion and Quality of Life

During the early years of mining, Russell County's quality of life was largely determined by coal companies. Population was congested near mine sites in narrow stream valleys. Sanitation was poor, prompting teams of vigilantes to aggressively enforce procedures to guarantee community health. Permanent dwellings were clay-chinked log cabins built close to streams for transport and access to drinking water. Clinchfield built Dante (350 houses) in 1906, and Wilder (230 houses) in 1910. Honaker was a logging town.

Russell County's peak mine employment was 2,252 in 1918, with coal production at nearly two million tons (mt). County population had grown to 26,786 by 1920. During the 1920s

Russell County claimed 550 miles of public highways, but its coal-bearing region was essentially roadless.

A 1922 Virginia Geological Survey (VGS) report listed 26 mines in the county near the towns of Dante, Wilder, Drill, and Dye (only Dante remains). Companies included Russell Fork Mining, Litton Coal, Hamlin Coal, Clinchfield Coal, Banner-Raven Coal, Tarklin Coal, and Flatrock Coal. Except for Clinchfield, most early coal companies operating in the county were locally owned.

County coal production reached 2.4 mt in 1928 (1,401 miners), but fell to less than 700,000 tons annually during the Great Depression. In 1930 the largest town was Dante (pop. 2,000), followed by Honaker (pop. 700), Lebanon (pop. 500), and Cleveland (pop. 400). The town of Wilder was abandoned after nearby mines closed. Even with coal development, Russell County remained primarily agrarian. By the 1930s, 82 percent of county area was devoted to agriculture, with more than 3,700 farms providing the largest source of income. Pasture covered 150,000 acres; cropland an additional 50,000.

A 1936 VGS report listed five large mines operating within Russell County: Clinchfield at Dante, Dixie Beaver at Clinchfield, Candlewax at Della, New Garden at Drill, and Sword Creek at Sword Creek. The report also notes that most Russell County coal was extracted through drift (horizontal tunnel) mines, and a few slope mines (entries conforming to the coal seam's downward dip). Because of their development cost, no shaft mines had been developed.

Recent History

With the onset of WWII, Russell County coal production rose dramatically (from 0.6 mt in 1940 to 1.3 mt in 1943). Demand remained high during and immediately following the war, with production reaching 2.1 mt by 1947 (1,172 miners).

As coal lost its transportation and residential heating markets, however, county production again dropped to less than one million tons annually (1951 through 1954), mainly from Clinchfield mines. During 1954, 28 mines closed, and mine employment was only 528. Principal operators in 1955 were Clinchfield, Smith, Turner, Bostic, and Sword & Ball. With higher demand, Russell County coal production quickly rebounded to a 1957 peak of 2.8 mt. Mine employment that year was 1,354.

The 1980 U.S. Census put county population at 31,761. Agriculture is still the principal industry, followed by coal and retail trade. Clinchfield Coal Co. remains the county's top producer, now owned by Pittston Coal Group (Lebanon). By 1988, Russell County coal production was only 361,000 tons (the lowest since 1908), with mining employment at 153. Russell County mines produced a total of 119,451,586 tons of coal from 1901 through 1988.

LEE COUNTY

Early History and Geography

Lee County was formed in 1792 from a portion of Russell County. Its coal-bearing region covers 78 square miles in a three-mile strip along the Kentucky border from Wise County to the "Pocket," a distinctive topographic feature and mining district near the town of St. Charles. Forest covered 85 percent of the terrain in the 1800s, with slopes most frequently too steep for tillage. Logging began along the Powell River in 1870. Sawmills were built during that year at Clintwood and Kingston. Coal production in 1889 was only 370 tons.

Railroads, Coal and Timber

The Louisville & Nashville Railroad (L&N) traversed Lee County in 1890, but commercial coal mining couldn't begin until connections were made with main line rails to the south. First, the Black Mountain Railroad was built from Big Stone Gap to meet the L&N at Pennington Gap. Coal mines opened near St. Charles in 1905 and 1906, the same year that the Southern Railroad (which had incorporated the Black Mountain and Virginia & Southwestern Railroads) connected Pennington Gap with the Norfolk & Western Railroad (N&W) at Bristol. Nearly 200,000 tons of coal was produced by 432 miners in 1907; coke ovens were built during the same year by Virginia Iron, Coal & Coke.

A 1908 Virginia Geological Survey (VGS) map of Lee County showed 16 mines, including those operated by Virginia Iron Coal & Coke (VICC), Black Mountain, Bondurant, Dominion, Pennington, Virginia-Lee, Darby, and Keokee. Production more than doubled that year, to 464,000 tons (621 miners). VICC is now part of ANR Coal Co.

With rail service and coal industry expansion, Lee County claimed 25,293 residents by 1920. Coal production that year was 946,000 tons (1,477 miners). The timber industry also prospered with demand for railroad ties, mine props, and lumber. The largest towns were mining centers, including Keokee (pop. 1,400) and St. Charles (pop. 400). A 1920 VGS map showed 27 mines in Lee County, including Black Mountain, Penn Lee, and United Collieries. During the same year, the L&N laid track from Pennington Gap to mines near St. Charles.

Because of its mountainous, heavily timbered terrain, travel in Lee County was difficult. A macadam (blacktop) road reached from Pennington Gap to St. Charles, and a dirt road from Keokee to Appalachia, but most roads were so bad that travel was mostly by horseback during the 1920s. Cultivated areas were small and confined to the Powell River Valley in scattered and infrequent level clearings. Farmers produced corn, garden vegetables, and cattle for the county's lumber and mining camps, but often took part-time or off-season employment in the woods or mines.

In 1924, Lee County timbermen produced nearly 23 million board feet of lumber, compared to mining's production of



1950 Louisville & Nashville steam locomotive carrying coal from St. Charles in Lee County to its junction with the Norfolk & Western at Norton (Wise County). *Harry W. Meador Coal Museum/Westmoreland Coal Co. (Big Stone Gap, VA).*

approximately one million tons (mt) of coal. The county claimed 43 sawmills and 35 coal mines, (23 in the "Pocket"). Timber revenues that year, however, totaled \$506,453 compared to coal's \$2.1 million. County coal production reached 2.2 mt in 1928 (1,964 miners), then declined to little more than a million tons annually during the Great Depression. A 1931 VGS map shows 16 mines in Lee County, including United Collieries, Virginia-Lee, and Virginia Iron, Coal & Coke.

Recent History

WWII coal demand raised Lee County production to 1.3 mt by 1943 (1,382 miners), but market losses suffered during the early 1950s reduced output to less than a million tons annually until 1968 (1.2 mt, 66 mines, 253 miners). By 1987, longwall mining had increased county production to an all-time high of 3.1 mt (37 mines, 648 miners). Lee County mines produced a total of 91,141,293 tons of coal from 1907 through 1988.

DICKENSON COUNTY

Geography and Early History

Dickenson County was originally part of a larger Russell County. Formed in 1880 by an act of the Virginia General Assembly, Dickenson contains 332 square miles. Clintwood, then a town of 200, was designated the county seat. Forest covered 84 percent of its rugged terrain, with deep, narrow valleys that afford little flat land. Settlers lived by hunting, vegetable gardening, stock raising (hogs), and barter. By 1910, the U.S. Census put county population at 9,199. Wagon roads were rocky and steep, with most early travel by foot or horseback.

Mining Industry Growth

Until railroads arrived in Dickenson County, coal was mined from small "country" openings. Production during 1889 was only 85 tons. A 1908 Virginia Geological Survey (VGS) map shows only small diggings that produced coal for local use.

The Cumberland Corp. of Virginia (a holding company controlled by New York banks), owned both the Carolina, Clinchfield & Ohio Railroad (CC&O) and the Clinchfield Coal Co. The CC&O began building track northward from Dante in 1908. Through a tunnel beneath Sandy Ridge, then along the McClure River and the tortuous gorge of the Russell Fork, the CC&O finally connected with the Chesapeake & Ohio Railroad (C&O) in 1915 at Elkhorn City, KY. Mines opened in Dickenson County at Trammel, Moss, and Haysi between 1916 and 1918; their first shipment on the CC&O totaled 13,500 tons in 1917.

As the rail and coal industries grew in Dickenson County, so did its population. By 1920, 12,000 people called the county

their home; Clintwood's population had increased from 350 in 1916 to 500. With 1,800, Dickenson County's largest town at that time was Moss, (founded in 1918 by Clinchfield Coal Co., which also built mining camps at Calhoun, Haysi, and Delano). 1920 coal production totaled 615,000 tons (970 miners).

New roads were completed by 1920 from Clintwood southwest to Darwin and Wise, and from Bearpen Gap southeast to the McClure River. A small railroad based at Honaker (in neighboring Russell County) served logging camps at McClure and Fremont. Farmers who worked the county's rocky soil produced corn, garden vegetables, oats, and cattle for sale to mining and lumber camps. In order of importance, Dickenson County's principal economic activities during the 1920s were lumbering, mining, and truck farming.

A 1921 a VGS map showed 18 mines in Dickenson County, most owned by Clinchfield Coal Co. and Virginia Iron, Coal & Coke (VICC). In 1925, the Louisville & Nashville Railroad (L&N) leased the CC&O, changing its name to the Clinchfield Railway (CRR), which initiated 52,200 tons of Dickenson County coal the following year. The railroad built a spur from Haysi to mines near the Buchanan County line in 1931 (and another in 1942 from Fremont to Clinchfield Coal's Moss #1 Mine).

The Great Depression reduced the number of county coal operations, evidenced by a 1931 VGS map that showed only 11 mines. Production that year was slightly more than one million tons (mt) from 921 miners; the largest mine operators were Clinchfield and Wakenva Coal. Production slowly grew during the decade, reaching a peak of 2.1 mt in 1941.



1986 view of longwall equipment at the McClure #1 Mine in Dickenson County, operated by Pittston Coal Group (Clinchfield Coal Co.). Facing tough domestic and international competition, Southwest Virginia's largest coal operators increasingly depend on high productivity techniques and equipment such as longwalls to safely mine deep coal seams. *Photograph by Ted Clutter.*

Despite coal's major market losses during the 1950s, steel industry demand for Dickenson County's premium coking coal helped maintain a generally rising production of between 3.1 mt (1954 - 1,910 miners) and 7.6 mt (1959 - 2,174 miners) throughout the decade. Principal coal producers in 1955 were Clinchfield, VICC, Baker, Cassell, R&P, Lambert, and Neece. By 1965, Dickenson's largest coal producers were Betty B, Clinchfield, VICC, Contracting Enterprises, Open Fork, and Kilgore Creek. Production that year was 8.8 mt (1,860 miners).

Dickenson County coal production peaked in 1967 at 9.5 mt (2,013 miners). Principal producers since then have been Pittston Coal Group (Clinchfield) and ANR (previously VICC). The U.S. Census put county population at 19,806 in 1980, with mining providing most employment. Other income sources included government, retail trade, manufacturing, and services. 1988 coal production totaled 8 mt (89 mines - 2,062 miners). Dickenson County mines produced a total of 289,202,881 tons of coal from 1917 through 1988.

SCOTT COUNTY

Scott County was formed in 1814 from a portion of Russell County. Coal deposits north of the Clinch River cover only five percent of its land area, with geology that presents difficult mining conditions. The county has historically claimed the lowest volume of Southwest Virginia coal production.

Exploitation of Scott County's small coal deposits was at first limited by terrain. Steep-graded streams feeding the county's major drainage, the Clinch River, offered little chance for large-scale transport. Sometime prior to 1908 an eight-mile, gravity-track tramway for carrying lumber was built along Stoney Creek from Fort Blackmore (once a frontier outpost). Another tramway transported coal from small operations down Little Stony Creek to Dungannon. A 1908 Virginia Geological Survey (VGS) map shows only one mine.

Scott County's limited commercial coal industry began in 1917, eight years after the arrival of Carolina, Clinchfield & Ohio Railroad (CC&O) tracks at Fort Blackmore. A 1923 VGS report noted three mines northeast of Dungannon, operated by Virginia Iron, Coal & Coke, and J.S.T. Coal Co. The report states that "in view of their inaccessibility, it will be many years before these coals will be worked profitably."

The 1923 prophecy proved true — for many years only one or two mines produced limited quantities of coal in Scott County. The U.S. Bureau of Mines reported no major coal production from the county until 1941 — a meager 27 thousand tons produced by 84 miners. Because there were no mining camps, no towns exist today in Scott County's small coal-bearing region.

Owing to the post-WWII coal boom, Scott County production rose to 112,000 tons by 1947, the same year that county mine employment peaked at 99. County coal production, however, soon suffered under the sharp blow of market losses during the 1950s. Production plunged to 15,000 tons in 1954, and remained below 25,000 tons annually through 1984 (19,000 tons, six mines, 25 miners). Production made a dramatic comeback to 105,000 tons the following year (seven mines, 44 miners).

Following the opening of the Trinity Mine, Scott County coal production peaked in 1986 at 123,836 tons from (five mines - 43 miners). According to the 1980 U.S. Census, the county claimed a population of 25,068, and the most diverse econ-



Construction of the Carolina, Clinchfield & Ohio Railroad through Scott County, circa 1907. Pictures courtesy Early Smith (Falls Mills, VA).

omy and lowest unemployment rate in the Southwest Virginia Coalfield. The largest employer is agriculture, followed by manufacturing, government, retail trade, and services. A few mine equipment sales and repair outlets are located in Duffield, beyond the county's coal-bearing region. 1988 coal production was 122,000 tons (30 miners). Scott County produced a total of 2,352,725 tons of coal from 1918 through 1988.

BUCHANAN COUNTY

Early History and Geography

Characterized by steep mountains and narrow, winding valleys, Buchanan County was chartered in 1858 by the Virginia General Assembly, and named in honor of President James Buchanan. According to the 1860 U.S. Census, population was 2,763, with pioneer communities established on any level space wide enough for a store and a few houses.

Buchanan County contains 507 square miles, all within the Southwest Virginia Coalfield. The majority of its land (85 percent) is too rugged for any industrial use but logging and coal mining. Because major railroads didn't penetrate the area until the 1930s, Buchanan was the last Southwest Virginia county to reap coal's economic rewards. In 1899, county residents mined a meager 169 tons, mostly to heat a Presbyterian school.

Early Transportation

The Virginia & Kentucky Turnpike was completed in 1860 from Tazewell County across Sandy Ridge through Buchanan County to Kentucky. This "improved road" was used by federal troops during the Civil War in a thwarted attempt to destroy salt mines at Saltville and a shot tower in Wytheville.

In 1903, William Ritter built the narrow-gauge Big Sandy & Cumberland Railway (BS&C) to carry lumber to Devon, WV, where the line linked with the Norfolk & Western Railroad (N&W). Ritter mined coal to fuel his small locomotives, and later for a steam power plant at one of his sawmills. In addition to the BS&C, C.L. Ritter operated a small railroad from Russell Fork Basin to Honaker. Davenport Lumber operated a similar line from Whitewood to Doran. A 1908 Virginia Geological Survey (VGS) map showed no large coal mines operating in Buchanan County.

With a population of 250 in 1918, Grundy was Buchanan County's largest settlement and county seat. During the same year, lumber mills were built at Hurley, Blackey, and PawPaw (Kelsa). The VGS recorded 10 mines, owned by C.L. Ritter, W.M. Ritter, Oliver Elswick, Davenport Lumber. In addition, Jewell Ridge Coal Corp. operated a large shipping mine. Remaining small mines operated only in winter for local heating fuel.

Even in 1920, automobiles couldn't traverse most roads in Buchanan County. Grading for the present U.S. 460 began in 1923 just below Little Prater Creek, yet after its completion through the county in 1931, it was left unpaved for years. Heavily timbered mountains offered only scattered clearings where farmers tended vegetable gardens, tilled small cornfields, and raised half-wild hogs.

N&W Spurs Coal Development

The Norfolk & Western Railroad (N&W) purchased the BS&C in 1923. For the following eight years, N&W leased the railroad to Wm. Ritter Lumber Co., while purchasing the additional right-of-way necessary to widen the line to stan-

dard gauge. In 1931, N&W rebuilt the old BS&C from Devon to Grundy.

Because large mines were under initial development when the first N&W train arrived at Grundy in 1931, there was no coal to ship. G.M. Bailey had started the Home Creek Smokeless Coal Co., and later that year the Buchanan City Coal Corp. opened a mine at Big Rock. The Lynn Camp Coal Corp. opened the Manatee Mine (also at Big Rock) and another mine at Home Creek.

Buchanan County's first major coal shipments were recorded in 1932. During the following year Panther Coal Co. and Virginia Lee Coal Co. opened mines at RoseAnn. Coal production in 1933 was 279,000 tons (284 miners), rising 1.4 mt by 1935 (1,385 miners). With the opening of three mines at Bull Creek, H.E. Harmon Coal Co. became the county's largest coal mining firm.

N&W extended their tracks south from Grundy during 1935-36, up the Levisa River to Vansant, onward to Garden Creek and Keen Mountain, then eastward up Dismal Creek (through Patterson, Roth, and Whitewood) to Jewell Ridge. With a major rail carrier to serve them, Red Jacket Coal opened a mine at Garden Creek, Oakwood Smokeless at Keen Mountain, Page Coal at Garden Creek, Sycamore Coal at Patterson, Crystal Rock Coal at Roth, Paragon Jewell at Whitewood, and Jewell Valley Smokeless at Jewell Valley. Production reached 3.6 mt by 1937 (3,391 miners).

Buchanan County Miners

With the arrival of the N&W in 1932 and the opening of new mines during the final years of the Great Depression, men seeking work flowed into Buchanan from nearby counties. Population increased from 16,740 in 1930 to 31,477 in 1940.

Buchanan County coal operations were usually drift mines with horizontal entries. During the early days of the county's coal industry, the mines were wet, ventilation inadequate, sanitation terrible, and work conditions hazardous. In 1934, a boy was electrocuted in the Virginia-Lee Mine. A coal dust explosion in the Red Jacket Mine killed 45 men in 1938. When a slate heap "dam" in a hollow behind the Oakwood Smokeless Mine crumbled after a heavy rain in 1942, a torrent of water crashed through nearby homes, killing seven women and children.

Miners in the 1930s owned their own tools (pick, bar, shovel) and furnished their own explosives. A strong man could load 40 tons per shift, for which he received about 4 cents/ton. Other mine workers included timbermen to set roof props, rock dusters to spread powdered limestone over exposed coal seams, motormen to operate coal removal machinery, and supplymen.

Like other coal operations across Southwest Virginia, Buchanan County mines were gradually mechanized. Loading machines (developed in the 1920s) replaced the shovel; punching tools and chain cutting machines replaced the

pick; and electric shuttles (developed in the 1930s) replaced mule trams.

Miners at Home Creek were organized in August 1933 by the United Mine Workers of America (UMWA). Later that year, under the leadership of UMWA district representative Lee C. Burke, the union organized miners working for large coal companies at Big Rock, Lynn Camp, RoseAnn, and Virginia-Penn. UMWA negotiations led to improved working conditions and higher wages for some Buchanan County miners, but the majority remained unorganized.

Fleeting Prosperity

Following WWII, Buchanan County coal production dropped from nearly six mt to 4.4 mt (1946). During the following decade, the industry suffered major losses in transportation fuel and residential heating markets to oil and natural gas. Declining coal demand forced a number of mine closures within the county, including Page, Harman, Rock Creek, RoseAnn, Home Creek, Oakwood, Keen Mountain, Roth, and Whitewood. Remaining mines operated with a three-day week.

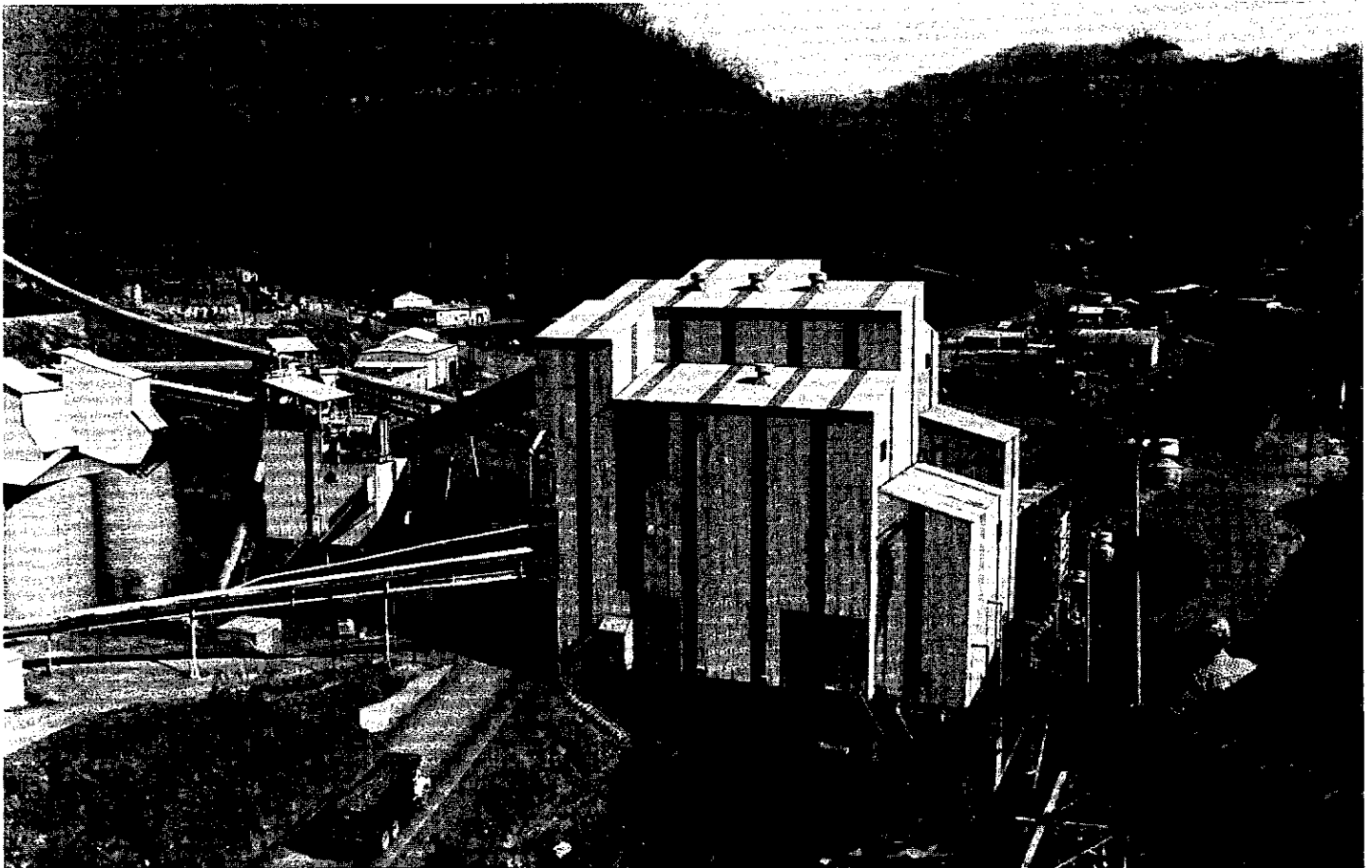
Non-union, family operated truck mines began operations across Buchanan County, benefiting from small starting in-

vestments and low overhead. While they did provide employment (between 8 and 12 miners per operation), these small operations were labor intensive, offered low wages, and lacked both mechanization and adequate safety measures. Unemployed union men resented truck miners, and in 1948 and 1950 state troopers were called in to restore order between factions and uphold Virginia's right-to-work law.

During the early 1950s, up to 65 percent of Buchanan County coal was produced by truck mines. Principal large coal companies were Jewell Ridge, Sycamore, Lester, Garden Smokeless, Wellmore, and Lynn Camp. As the industry recovered from depressed markets after 1956, they were joined by Island Creek, Pittston, Knox Creek, and Harman. Production that year was 9.6 mt (6,142 miners). By 1961 however, the county still claimed 958 truck mines (compared to a total of 981), employing 5,825 miners (compared to a total of 6,458). Buchanan County production that year was 11 mt.

Coal Rebounds With Deep Operations

As mechanization increased mine productivity and coal markets improved in response to the 1960s' expanding economy, large coal companies operating in Southwest Virginia invested in deep shaft mines to reach thicker and richer coal



Coal cleaning plant at United Coal Co.'s Wellmore Complex, Big Rock, VA. United rapidly became one of Buchanan County's leading coal producers after its formation in 1970, gaining a competitive edge by building modern coal preparation plants and rail loading facilities. *Photograph by Ted Clutter.*

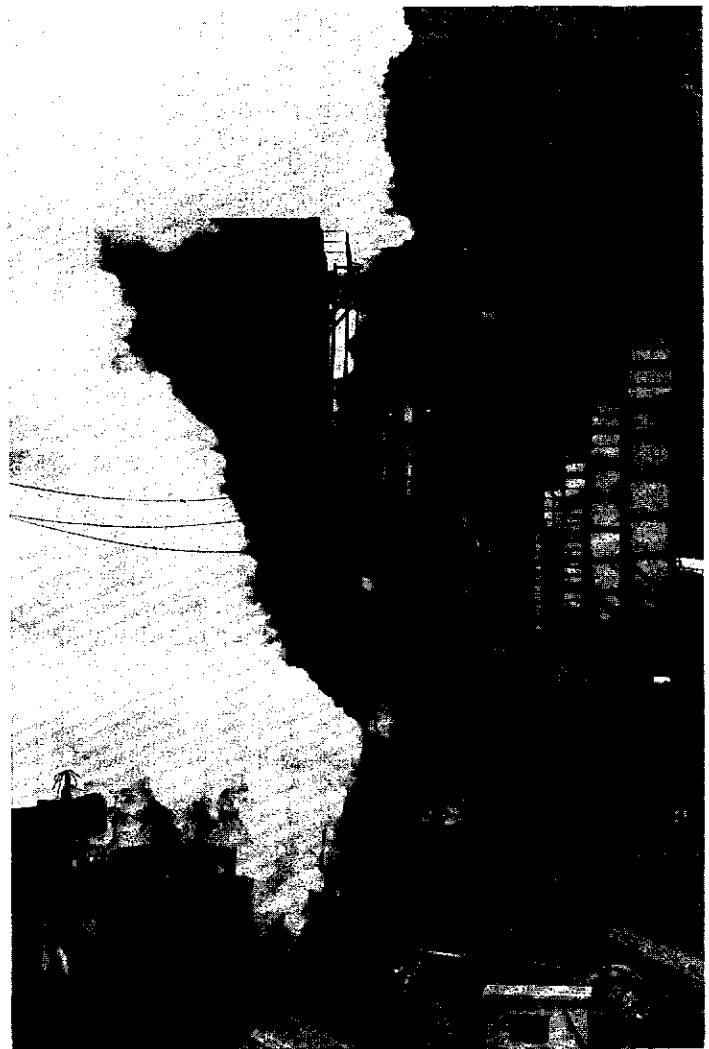
seams. At a cost of \$15 million in 1961, Island Creek Coal Co. opened the Beatrice Shaft on Keen Mountain, the deepest coal mine in North America at the time.

In 1966, Buchanan County's largest coal producers were Island Creek, Jewell Ridge, and Harman. Production was more than 16.3 mt (5,241 miners). By the late-1960s, deep shaft mines were developed by Pittston, Harman, and Jewell Smokeless. By this time only 469 truck mines remained, and like the county's 63 surface mining operations they were owned and operated by local entrepreneurs.

Development continued. N&W built a spur from Jewell Ridge through Wyatt's Cutoff via Deep Creek to meet their Clinch River Branch at Richlands in 1970. The grade is so steep that coal from mines north of Wyatt's Cutoff must be shipped north to Devon, WV on N&W's Tug River Branch. By 1975, Island Creek Coal Co. had opened six deep shaft mines in the county with a total investment of \$100 million.

It is worth noting that within seven years of its formation in 1970, United Coal Co. became one of Buchanan County's major coal producers. The company is a unique example of success in a highly competitive business dominated by large corporations. An aggregate of nine small companies, United gained a competitive edge by building modern preparation plants and loading facilities.

By 1980 Buchanan County's population had grown to 37,989, with an economy dominated by the coal industry. Consolidation Coal Co. opened a large deep mine in 1988, spurring county production to an all-time high of 19.8 mt (4,779 miners). Other major producers were Island Creek, United, Consolidation, Permac, Harman, and Pittston. Buchanan County mines produced a total of 716,751,459 tons of coal from 1932 through 1988, claiming an average annual coal production rate of 12.8 mt per year — the highest in the Southwest Virginia Coalfield.



1987 view of Jewell Smokeless coke ovens at Vansant, the last coke production operation in Virginia. *Photograph by Ted Clutter.*

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Virginia Coal Data 1748 - 1988

A result of a five-year study, the following data collection provides the only single, comprehensive source of information on Virginia coal production and consumption from its beginnings to the present. Though sources varied in specifications and recording methods, comparisons between tables are valid for similar time periods. Tonnage data are rounded and may not add to exact totals.

E.A. Eavenson compiled data from various sources for Virginia coal production from 1748 through 1884. Considering the loss of most Virginia mining records during the Civil War, his reconstruction effort was remarkable. The U.S. Geological Survey (USGS) maintained records for Virginia coal mining from 1881 through 1930; the U.S. Bureau of Mines (USBM) carried on the task from 1931 through 1975. The USGS and the USBM limited data collection to mines producing more than 1,000 tons annually, and the latter based its data on rail shipments, which may differ from actual coal production.

Both agencies sometimes combined county data to conceal the identities and production of individual mines. Production was credited to the county in which the mine entry was located, even though coal produced may have actually come from a different county or state. For example, part of the coal credited to Buchanan and Tazewell counties may have been mined in West Virginia, while part of the coal reported for Dickenson, Wise, and Lee counties may have actually been mined in Kentucky.

Since 1946 the Virginia Division of Mines (Virginia Department of Mines, Minerals & Energy) has provided the most extensive and accurate data for Commonwealth coal production, including information from all licensed mines regardless of size, and only coal actually mined within the state's borders.

Some of the data in the tables were derived by simple calculation:

- Productivity = #tons / #miners / #days worked
- Miner Wages = total \$wages / #miners / #days worked
- Wage Cost = total \$wages / #miners / #days worked
- Office Worker Salaries = total \$wages / #office workers

Some office worker salaries may seem unusually high, possibly a result of mine owner profit being included in report totals. If you have any additional information or detect any errors in the following compilation, please contact VCCER.

Historical Summary of Virginia Coal Mining: 1988-1748
Production by Mine Type & Method, By County
(Million Tons)

	Surface		Underground				Continuous		
	Auger	Strip	Tipple	Truck	TOTAL	Hand	Machine	Miner	Longwall
RICHMOND									
1904-1748	0	0	na	na	8	8	0	0	0
VALLEY									
Montgomery									
1988-1946	0	<1	1	<1	1	1	<1	0	0
1945-1840	0	0	na	na	4	4	0	0	0
TOTAL	0	<1	1	<1	5	5	<1	0	0
Pulaski									
1988-1880	0	0	0	3	3	3	0	0	0
SOUTHWEST									
Buchanan									
1988-1946	14	42	168	310	534	134	238	128	34
1945-1932	0	0	na	na	37	13	24	0	0
TOTAL	14	42	na	na	571	147	262	128	34
Dickenson									
1988-1946	4	34	142	78	259	30	195	59	7
1945-1917	0	0	na	na	31	14	17	0	0
TOTAL	4	34	142	na	290	44	212	59	7
Lee									
1988-1946	3	5	21	20	49	9	18	18	3
1945-1907	0	0	na	na	45	23	23	0	0
TOTAL	3	5	na	na	94	32	41	18	3

Sources: *Virginia Division of Mines Annual Reports*, 1946-1988. U.S. Bureau of Mines *Minerals Yearbook*, 1945-1932. U.S. Geological Survey *Mineral Resources* (annual), 1931-1878. Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.

Historical Summary of Virginia Coal Mining: 1988-1748
Production by Mine Type & Method, By County
(Million Tons)

	Surface		Underground		TOTAL	Hand	Continuous		
	Auger	Strip	Tipple	Truck			Machine	Miner	Longwall
Russell									
1988-1946	2	9	48	12	71	10	42	18	1
1945-1900	0	0	na	na	102	51	51	0	0
TOTAL	2	9	na	na	173	61	93	18	1
Scott									
1988-1946	0	<1	0	1	1	1	<1	<1	0
1945-1934	0	0	na	na	<1	<1	0	0	0
TOTAL	0	<1	na	na	2	1	<1	<1	0
Tazewell									
1988-1946	1	5	31	26	63	12	27	24	0
1945-1883	0	0	na	na	105	68	37	0	0
TOTAL	1	5	na	na	168	80	64	24	0
Wise									
1988-1946	10	114	129	112	365	45	209	107	4
1945-1889	0	0	na	na	187	146	41	0	0
TOTAL	10	114	na	na	552	191	250	107	4
VIRGINIA									
1988-1946	34	210	549	558	1350	206	684	390	58
1945-1935	0	0	na	na	168	60	90	0	0
1934-1894	0	0	na	na	332	135	158	0	0
1893-1854	0	0	na	na	10	10	<1	0	0
1853-1814	0	0	na	na	4	4	0	0	0
1813-1748	0	0	na	na	<1	<1	0	0	0
TOTAL	34	210	na	na	1864	415	933	390	58

Sources: *Virginia Division of Mines Annual Reports, 1946-1988*. U.S. Geological Survey *Mineral Resources* (annual), 1931-1878. Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.

Virginia Coal Production by Mine Type & Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground			Underground			
	Auger	Strip	Tipple	Truck	TOTAL	Hand	Machine	CM*	LW*
1988	397	7546	15352	23070	46365	0	9909	26334	10121
1987	559	6855	15392	22731	45538	0	11650	24685	9203
1986	426	6676	14157	20510	41768	0	12349	22770	6637
1985	400	6709	13138	22130	42376	0	13905	23480	4991
1984	350	6959	10409	23707	41425	76	17419	20939	2991
1983	537	7040	8714	19214	35506	2	16832	16922	1750
1982	354	7988	10282	21857	40481	15	18612	20729	1125
1981	499	7987	10670	22622	41978	23	20882	19439	1634
1980	278	8374	12405	19953	41009	58	20043	19164	1745
1979	368	8127	10994	17544	37038	40	17762	17781	1456
1978	724	9721	7491	13975	31911	102	17852	13106	850
1977	1134	12448	10039	13893	37513	49	22613	13463	1388
1976	981	12959	12515	13540	39996	28	24166	14409	1393
1975	1204	11160	12156	10986	35506	43	21130	13217	1115
1974	1556	10048	12607	10072	34284	51	20612	11337	2284
1973	1827	8703	13788	9551	33869	100	20656	11381	1732
1972	1777	8279	15362	8561	33996	193	19845	12738	1220
1971	1795	7177	13632	8022	30625	145	19832	9509	1139
1970	1875	5103	17839	10157	34975	928	19484	13008	1555
1969	1626	3493	18520	12013	35652	1662	19472	12985	1532
1968	1392	4046	17367	14059	36866	3170	21081	11625	990
1967	2027	4079	15508	14801	36415	5569	21039	9289	518
1966	2155	3649	13511	16257	35573	9400	17848	8082	243
1965	1561	3077	11941	17484	34063	12046	14119	5898	0
1964	1138	2452	11041	17142	31733	13891	17881	3324	0
1963	1381	2108	10612	16288	30390	14433	13769	2188	0
1962	908	1795	10600	16167	29470	14863	12875	1732	0
1961	695	1409	11901	14151	28156	12816	14174	1166	0
1960	649	1373	11449	13234	26706	14626	11055	1025	0
1959	656	1753	12542	13273	28224	11877	15063	1283	0
1958	682	1590	10717	12062	25031	10852	13234	945	0
1957	558	1797	10771	13401	28528	12339	12686	1503	0
1956	573	1749	13290	10393	26005	11219	13829	957	0
1955	248	962	11649	8975	21834	8763	15063	982	0
1954	224	745	7979	6224	15172	6052	8824	311	0
1953	275	1307	10608	6490	18680	4454	11203	106	0
1952	0	2259	13186	5285	20730	8598	12236	0	0
1951	0	1219	14059	4720	19999	na	na	0	0
1950	0	1629	11261	4691	17591	5214	12377	0	0
1949	0	1581	10007	4419	16008	na	na	0	0
1948	0	2369	13858	2987	19214	na	na	0	0
1947	0	1702	15827	2656	15753	na	na	Shot Solid	
1946	0	923	13402	1247	15752	2972	12127	653	

Note: (*) CM = continuous miner LW = longwall

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Virginia Underground Coal Production by Mining Method: 1975-1934
(Thousand Tons)

Year	Shot From Solid	Shot After Undercut by		Continuous Miner	Longwall	TOTAL
		Hand	Machine			
1975	1383*	na	6892	13875	1032	23181
1974	1165*	na	7617	12393	1592	22767
1973	631*	na	9756	11317	1733	23437
1972	na	na	9845	12738	1220	na
1971	703*	na	10554	9235	1139	21631
1970	1290*	na	15694	10079	1555	28018
1969	2021*	na	15277	11543	1532	30313
1968	2509*	na	17489	10411	990	31400
1967	3175*	na	17741	9065	518	30500
1966	4665*	na	16997	8082	243	29745
1965	3905*	na	19563	5898	0	29365
1964	4121*	na	20620	3324	0	28065
1963	4614*	na	19991	2188	0	26793
1962	4775*	na	20230	1723	0	26728
1961	4260*	na	21784	2166	0	28210
1960	4464*	na	20330	1025	0	25820
1959	4719*	na	21299	1283	0	27300
1958	4659*	na	18822	944	0	24425
1957	3976*	na	21583	1503	0	27061
1956	4074*	na	20457	957	0	25489
1955	2296*	na	18963	982	0	22241
1954	2894*	na	12103	311	0	15307
1953	1196*	na	16282	56	0	17544
1952	1120	66	18147	0	0	19333
1951	797	57	19172	0	0	20026
1950	692	88	15320	0	0	16101
1949	695	66	12749	0	0	13510
1948	1006	80	15497	0	0	16583
1947	1341	54	17637	0	0	19032
1946	1011	134	13727	0	0	14871
1945	1033	156	15737	0	0	16926
1944	1118	576	17718	0	0	19352
1943	1287	353	18640	0	0	20280
1942	1671	134	18331	0	0	20136
1941	1472	50	16917	0	0	18438
1940	1180	41	14121	0	0	15342
1939	945	106	12479	0	0	13531
1938	678	218	11381	0	0	12283
1937	na	na	na	0	0	na
1936	949	197	10516	0	0	11662
1935	776	212	8679	0	0	9667
1934	874	34	8466	0	0	9377

Note: (*) Combined tonnage for shooting from solid and hand undercutting.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1934-1975.

Virginia Coal Production by Mine Type, Distribution & Use: 1975-1935
(Thousand Tons)

Year	Production				Distribution			Coal to Coke	Coke Total
	Auger	Strip	Uground	TOTAL	Rail	Truck	Local		
1975	3184	9145	23181	35510	30381	5125	na	na	641
1974	3685	7874	22767	34326	30426	3876	na	23	450
1973	1827	8703	23339	3386	na	na	na	na	415
1972	2100	7935	23993	34028	na	na	na	na	410
1971	1829	7168	21631	29340	29340	1276	na	12	386
1970	1895	5103	28018	33304	33304	1656	na	56	427
1969	1621	3561	30373	34049	34049	1316	na	190	387
1968	1520	4046	31400	34511	34511	2241	na	214	419
1967	2025	4196	30500	33701	33701	2802	na	218	460
1966	2155	3649	29768	35565	30537	4823	na	201	832
1965	1561	3077	29425	34053	29431	4106	na	216	777
1964	217	4104	27332	31653	27333	4104	na	217	674
1963	1381	2108	26900	30531	26556	3771	na	204	587
1962	282	4066	25126	29474	25126	4066	na	282	427
1961	695	1409	26052	30332	14221	13235	382	319	427
1960	649	1373	24683	27838	13210	12908	214	178	325
1959	656	1753	25815	29769	15262	12363	266	333	361
1958	682	1590	22779	26826	13093	10638	1089	212	243
1957	558	1797	24172	29506	14554	11260	483	231	215
1956	573	1749	23683	28063	16210	8935	611	243	166
1955	248	962	20624	23508	19165	2413	24	248	141
1954	224	745	14204	16387	13832	1254	6	95	72
1953	275	1307	17098	19119	17472	1044	26	221	188
1952	0	2259	18471	20730	19687	866	41	240	202
1951	0	2246	18779	21025	na	na	na	na	287
1950	0	1629	15951	17580	13446	307	16	276	198
1949	0	1581	14426	16007	13794	519	na	272	158
1948	0	2369	16845	19214	17381	286	na	332	201
1947	0	1702	18483	20185	19423	261	na	486	212
1946	0	656	14649	15305	14757	362	114	293	171
1945	0	309	17603	17912	16485	313	128	309	191
1944	0	162	19433	19595	18677	289	124	424	243
1943	0	na	20652	20652	19334	301	129	516	293
1942	0	na	20430	20430	19030	396	124	586	351
1941	0	na	17157	17157	17413	377	99	552	325
1940	0	6	14456	14462	14583	322	91	352	198
1939	Solid	Hand	Machine	13531	na	na	na	na	165
1938	678	218	11381	11818	11727	220	72	264	134
1937	na	na	na	13221	13017	246	80	451	240
1936	949	197	10516	11662	11065	148	87	361	191
1935	776	212	8679	9667	9260	80	71	256	138

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1934-1975.

Virginia Coal Production by Mine Method, Distribution & Use: 1934-1894
(Thousand Tons)

Year	Uground	Shot Solid	Shot After Undercut		Distribution				Coal to Coke	Coke Total
			Hand	Machine	Rail	Truck	Local	Mine		
1934	9376	875	34	8467	9058	79	80	160	na	78
1933	8178	721	87	7370	7893	42	98	24	121	70
1932	7692	729	81	6882	7461	6	98	31	95	56
1931	9699	1107	45	8547	9392	0	103	39	164	99
1930	10908	1440	49	9419	10414	0	96	36	360	220
1929	12748	1652	175	10921	12120	0	92	41	495	315
1928	11900	1560	129	10211	11372	0	112	39	378	275
1927	12916	1763	64	11089	12234	0	108	51	522	317
1926	14125	2274	197	11654	13382	0	122	53	577	371
1925	12798	2006	320	10472	12032	0	114	40	614	422
1924	10667	1924	224	8519	9756	0	169	52	717	485
1923	11678	2521	512	8645	10293	0	212	96	1161	775
1922	10426	2372	512	7542	9651	0	156	100	584	378
1921	7493	1421	230	5842	6818	0	153	99	423	280
1920	11242	2945	346	7951	9354	0	299	103	1622	1028
1919	9317	1717	1287	6313	7559	0	165	118	1485	1247
1918	9956	2027	1535	6394	8189	0	393	108	1601	1234
1917	10074	3262	371	6441	7734	0	174	145	2035	1304
1916	9705	3267	427	6011	7514	0	157	113	1924	1242
1915	8120	2754	235	5131	6948	0	82	136	956	630
1914	7959	2427	1439	4093	6438	0	84	145	1292	781
1913	8825	2879	1740	4206	6615	0	83	176	1953	1304
1912	7847	3742	899	3206	6028	0	108	183	1528	968
1911	6860	2443	1865	2552	5231	0	82	182	1805	910
1910	6508	na	na	2290	4063	0	88	148	2209	1494
1909	4752	na	na	1323	2702	0	54	182	1815	1347
1908	4259	na	na	1036	3344	0	68	111	1736	1162
1907	4711	na	na	789	2360	0	79	97	2176	1545
1906	4276	na	na	424	2172	0	92	92	2172	1558
1905	4275	na	na	399	2010	0	59	87	2119	1499
1904	3584	na	na	246	1896	0	45	66	1577	1102
1903	3451	na	na	82	1623	0	30	57	1741	1176
1902	3183	na	na	75	1445	0	21	32	1685	1125
1901	2276	na	na	233	1391	0	16	29	1290	907
1900	2394	na	na	231	1335	0	46	41	973	685
1899	2106	na	na	265	1176	0	24	19	888	619
1898	1815	na	na	244	1029	0	20	16	750	532
1897	1528	na	na	324	970	0	29	43	486	354
1896	1255	na	na	376	824	0	41	39	351	405
1995	1368	na	na	479	1024	0	15	22	307	240
1894	1229	na	na	344	1016	0	21	5	188	180

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1894-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1934.

Virginia Coal Production by Mine Method, Distribution & Use: 1893-1854
(Thousand Tons)

Year	Tonnage	Underground		Distribution			Coal to Coke	Coke Total
		Hand	Machine	Rail	Local	Mine		
1893	820	623	197	714	21	5	81	283
1892	675	560	115	527	21	6	121	148
1891	736	663	74	583	17	3	133	168
1890	784	713	71	609	17	5	153	166
1889	866	805	61	733	13	8	112	147
1888	1073	1051	21	822	14	na	148	140
1887	825	na	na	656	9	na	161	167
1886	685	685	0	576	16	na	94	122
1885	567	567	0	na	na	na	82	49
1884	336	336	0	na	na	na	99	64
1883	252	252	0	na	na	na	39	25
1882	112	112	0	na	na	na	0	0
1881	50	50	0	na	na	na	0	0
1880	43	43	0	na	na	na	0	0
1879	45	45	0	14	na	na	<u>Canal</u>	<u>Wagon*</u>
1878	50	50	0	11	1	na	10	na
1877	68	68	0	58	2	12	16	na
1876	57	57	0	62	12	4	20	na
1875	89	89	0	115	5	6	35	na
1874	82	82	0	109	na	5	20	na
1873	102	102	0	135	na	7	14	na
1872	96	96	0	136	na	6	13	na
1871	102	102	0	137	na	7	12	na
1870	90	90	0	105	na	6	31	na
1869	116	116	0	109	na	8	39	na
1868	96	96	0	50	na	6	45	na
1867	91	91	0	64	na	5	51	na
1866	71	71	0	65	na	5	24	na
1865	74	74	0	52	na	5	20	2
1864	117	117	0	119	na	7	20	2
1863	112	112	0	121	na	7	23	2
1862	115	115	0	136	na	8	22	2
1861	97	97	0	114	18	6	21	na
1860	112	112	0	131	30	7	31	na
1859	106	106	0	131	15	7	21	na
1858	114	114	0	138	19	7	24	na
1857	115	115	0	125	19	8	37	na
1856	106	106	0	122	na	7	24	na
1855	126	126	0	142	na	8	27	na
1854	133	133	0	157	na	9	27	na

Note: (*) All figures below represent transport by method.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1883-1893. Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.

Virginia Coal Production by Mine Method, Distribution & Use: 1853-1814
(Thousand Tons)

Year	Hand Mined Underground	Shipped by			Export	Mine Use	Shipped to	
		Rail	Canal	Wagon			Phil	NYC
1853	102	133	26	na	14	6	na	na
1852	106	95	26	na	na	7	na	na
1851	137	104	30	40	3	9	na	na
1850	138	89	39	57	2	9	na	na
1849	139	110	40	57	1	9	na	na
1848	121	110	33	57	3	8	na	na
1847	136	135	35	57	3	9	na	na
1846	125	113	29	57	3	8	na	na
1845	135	32	37	57	7	9	na	na
1844	115	72	19	57	7	8	na	na
1843	96	58	na	57	7	6	na	na
1842	74	58	28	72	7	na	na	na
1841	80	54	na	na	7	na	na	na
1840	90	18	na	na	7	na	na	na
1839	96	56	na	na	na	na	na	na
1838	108	51	na	na	na	na	na	na
1837	112	6	31	na	na	na	na	na
1836	124	93	33	na	na	na	na	na
1835	175	na	27	na	140	na	na	na
1834	124	na	22	na	na	na	na	na
1833	160	na	28	na	142	na	na	13
1832	132	na	27	na	na	na	na	15
1831	104	na	24	na	na	na	na	na
1830	103	0	28	na	na	na	na	na
1829	93	0	27	na	na	na	4	na
1828	100	0	24	na	na	na	4	na
1827	85	0	21	40	na	na	4	na
1826	89	0	14	na	na	na	4	na
1825	67	0	15	36	na	na	4	na
1824	67	0	na	50	na	na	4	na
1823	44	0	na	na	na	na	na	na
1822	54	0	<1	na	na	na	<1	na
1821	64	0	12	na	na	na	<1	na
1820	62	0	na	4	na	na	<1	na
1819	60	0	na	na	na	na	3	na
1818	59	0	na	na	na	na	4	na
1817	58	0	na	na	na	na	2	na
1816	57	0	na	na	na	na	6	na
1815	56	0	10	na	na	na	na	na
1814	54	0	na	na	na	na	na	na

Sources: Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.
Wilkes, 1988. *Mining History of the Richmond Coalfield of Virginia*. Charlottesville: Virginia Division of Mineral Resources.

Virginia Coal Production by Mine Method, Distribution & Use: 1813-1748
(Thousand Tons)

Year	Hand Mined Underground	Distribution			Shipped to			
		Canal	Wagon	Export	Phil	Balt	Wash	NYC
1813	52	na	na	na	na	<1	na	na
1812	50	na	40	na	na	9	na	na
1811	48	na	na	na	na	na	na	na
1810	47	1	na	na	na	na	na	na
1809	46	5	3	na	na	na	na	na
1808	45	11	<1	na	na	na	na	na
1807	44	14	22	na	na	na	na	na
1806	43	12	4	na	na	na	na	na
1805	42	15	9	na	na	na	na	na
1804	41	14	27	na	na	na	na	na
1803	30	14	15	<1	na	na	na	na
1802	26	na	2	na	na	na	na	<1
1801	22	na	na	na	<1	na	1	na
1800	18	na	na	na	na	na	na	na
1799	14	na	na	na	na	na	na	na
1798	22	10	na	na	na	na	na	na
1797	7	1	na	na	na	na	na	na
1796	4	na	na	na	na	na	na	na
1795	2	na	na	na	na	na	na	na
1794	1	na	na	na	na	na	na	na
1793-1748	>1	na	na	na	na	na	na	na

Source: Evenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.

Virginia Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons	Wage(\$)	Office Workers	
				\$/Year	\$/Day		Man Day	Ton	#	\$/Year
1988	54	180	110	12352	112	347	20.05	5.60	3	360
1987	54	250	109	12108	111	559	20.52	5.41	14	20293
1986	51	307	109	11384	105	426	12.12	8.66	16	13235
1985	51	160	na	18184	na	400	na	7.27	23	13500
1984	47	189	na	14304	na	350	na	7.73	10	6443
1983	42	97	72	19243	198	537	76.93	2.57	10	4592
1982	40	79	51	19797	388	355	88.03	4.41	6	3361
1981	54	103	48	15961	333	499	100.96	3.29	8	8162
1980	48	65	55	-	-	277	77.56	-	12	2347
1979	35	95	80	14968	158	368	48.37	3.26	24	10011
1978	58	162	78	16293	209	724	57.32	3.64	31	20622
1977	94	194	87	15838	182	1134	67.16	2.71	33	8442
1976	95	289	94	12583	134	981	36.10	3.71	36	4958
1975	101	328	86	15533	181	1204	42.68	4.23	41	9288
1974	103	352	91	12362	136	1556	48.58	2.80	46	4111
1973	118	270	78	10077	129	1827	86.76	1.49	42	2097
1972	139	288	81	7523	93	1777	76.17	1.22	51	1605
1971	110	196	49	7455	152	1795	186.88	0.81	28	2277
1970	107	209	102	6364	62	1875	87.95	0.71	29	1282
1969	88	188	103	10523	56	1626	83.95	0.67	31	7870
1968	82	158	112	5163	46	1393	78.72	0.59	15	6470
1967	64	161	148	4883	33	2027	85.09	0.38	7	3337
1966	71	194	150	4942	33	2156	74.08	0.44	6	10290
1965	63	158	132	5376	41	1561	74.83	0.54	24	5431
1964	59	160	130	5468	42	1138	54.73	0.77	15	2503
1963	53	176	140	4392	31	1381	56.05	0.56	36	3016
1962	41	134	143	4522	32	908	47.36	0.67	20	2274
1961	35	89	140	4123	29	695	55.79	0.53	15	2813
1960	35	118	139	2912	21	649	39.57	0.53	2	435
1959	37	146	118	4413	37	656	38.06	0.98	25	4087
1958	44	136	125	3605	29	661	38.90	0.74	15	4382
1957	24	54	158	3612	23	558	65.43	0.35	5	625
1956	na	102	188	4271	23	573	29.88	0.76	8	2512
1955	na	118	128	2209	17	248	16.43	1.05	4	3470
1954	na	79	98	3709	38	224	28.96	1.31	6	2841
1953	28	na	na	na	na	275	na	na	na	na

Note: No auger mines reported prior to 1953.

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Virginia Strip Mine Performance: 1988-1944
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Tonnage	Tons	Wage(\$)	Office Workers	
				\$/Year	\$/Day		Man Day	Ton	#	\$/Year
1988	118	1605	226	20906	93	7546	20.80	4.45	96	22423
1987	140	1798	259	17406	67	6855	14.72	4.57	180	17106
1986	145	1760	167	22780	136	6676	22.71	5.99	136	38976
1985	150	1667	na	20216	na	6709	na	5.02	399	11267
1984	161	1770	na	21063	na	6959	na	5.36	239	22485
1983	137	1375	154	24674	156	7040	33.25	4.69	158	19713
1982	212	1711	128	24390	191	7988	36.47	5.22	105	14020
1981	261	1666	103	23715	230	7987	46.54	4.94	179	16969
1980	272	1738	106	20977	198	8374	45.45	4.36	143	12339
1979	278	1870	105	19168	183	8128	41.39	4.41	185	14354
1978	277	2225	152	18777	124	9721	28.74	4.29	241	16598
1977	393	2715	144	16438	115	12448	31.83	3.60	253	52617
1976	399	2368	139	15765	113	12959	39.37	2.88	212	9858
1975	416	2287	132	14442	109	11160	36.96	2.96	219	8966
1974	355	1611	182	12986	71	12607	43.00	1.66	193	4803
1973	261	1185	106	10170	96	8703	69.29	1.38	118	3618
1972	267	1217	102	8237	81	8297	66.84	1.21	141	3562
1971	241	969	100	8133	81	7177	74.06	1.10	178	1696
1970	181	643	96	7124	74	5103	82.68	0.90	200	1577
1969	96	434	111	6372	57	3493	72.49	0.79	42	7939
1968	99	434	137	6132	45	4046	68.05	0.66	32	9091
1967	76	393	216	6051	28	4079	48.04	0.58	26	9312
1966	76	376	163	5835	36	3649	58.54	0.60	23	8499
1965	64	364	167	5397	32	3077	50.62	0.64	33	5790
1964	48	324	204	5686	28	2452	37.09	0.75	25	6119
1963	49	292	146	5581	38	2108	49.46	0.77	32	4124
1962	47	285	145	5702	39	1795	43.43	0.91	34	3408
1961	38	275	156	4142	27	1409	32.85	0.81	33	3288
1960	46	314	138	4001	29	1374	31.71	0.91	38	3382
1959	44	287	129	4721	37	1753	47.36	0.77	36	2894
1958	45	324	144	3946	27	1590	34.08	0.80	26	4892
1957	37	357	151	5086	34	1868	34.65	1.01	35	3105
1956	32	353	149	3722	25	1969	37.44	0.75	28	3550
1955	31	249	125	3228	26	982	31.54	0.84	14	3101
1954	19	260	164	3445	21	745	17.48	1.20	17	3836
1953	27	344	na	na	na	1307	na	na	na	na
1952	31	487	na	4698	na	2259	na	na	40	5594
1951	31	587	224	3901	17	2246	17.11	1.23	25	4516
1950	19	565	172	3575	17	1566	16.11	0.42	31	2527
1949	16	445	159	na	na	1073	15.17	na	na	na
1948	18	404	na	na	na	2368	na	na	na	na
1947	15	144	na	na	na	1702	16.29	na	na	na
1946	15	295	152	na	na	656	14.63	na	na	na
1945	8	125	175	na	na	309	13.12	na	na	na
1944	5	74	137	na	na	162	15.98	na	na	na

Note: Virginia's first strip mine produced 6,400 tons with 4 employees in 1940. No further strip mining activity reported until 1944.

Source: *Virginia Division of Mines Annual Reports, 1946-1988.*

Virginia Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	32	3263	238	30028	126	15352	0	5680	9672	19.77	6.38
1987	39	3422	241	34089	141	15392	33	6579	8781	18.66	7.58
1986	41	3647	281	33844	120	14157	183	7500	6604	13.81	8.72
1985	43	3659	na	35162	na	13138	204	7964	4991	na	9.79
1984	57	4644	na	35519	na	10409	204	7214	2991	na	13.78
1983	45	3884	198	29312	148	10409	96	6868	1750	11.33	13.06
1982	54	5787	172	25160	146	8714	197	8959	1125	10.33	14.16
1981	56	6005	190	25154	132	10282	395	8841	1634	9.53	13.89
1980	62	6522	219	24189	110	12405	749	9911	1745	8.68	12.72
1979	61	6986	198	20079	101	10994	569	8970	1456	7.95	12.76
1978	64	5917	140	14462	103	7491	275	3366	850	9.04	11.43
1977	69	7656	164	16762	102	10038	530	8120	1388	8.00	12.78
1976	59	7799	206	16051	78	12515	913	10208	1393	7.79	10.00
1975	57	7577	192	15121	79	12156	2115	9009	1032	8.36	9.44
1974	54	6921	182	12647	69	12607	2166	8257	2185	10.01	6.94
1973	51	8071	200	10009	50	13788	3823	8366	1600	8.54	5.86
1972	44	6572	227	10490	44	15362	5160*	10202	na	10.30	4.49
1971	55	5557	155	11075	71	13632	5828*	7804	na	15.82	4.51
1970	45	6715	200	8460	42	17839	7106*	10733	Hand	11.04	3.18
1969	37	5707	209	7772	37	18520	7458*	11057	6	15.53	2.40
1968	45	5183	208	6821	33	17367	7937*	9414	16	16.11	2.04
1967	39	3883	216	7644	35	15508	7735*	7745	28	18.49	1.91
1966	39	3209	204	7437	36	13511	13381**	na	129	20.64	1.76
1965	33	2779	216	6740	31	11941	11794***	na	147	19.89	1.57
1964	34	2680	204	6316	31	11041	10896***	na	145	20.19	1.53
1963	36	2767	208	6218	30	10612	10399***	na	213	18.44	1.62
1962	40	2855	173	6427	37	10600	10342***	na	258	21.46	1.73
1961	37	3268	190	5665	30	11901	11591***	na	310	19.17	1.56
1960	43	3669	176	5720	33	11449	11047***	na	402	11.70	1.83
1959	56	4291	172	5565	32	12542	12082***	na	460	16.99	1.90
1958	52	4502	164	5050	31	10717	10211***	na	506	14.52	2.12
1957	58	5455	190	5612	30	10771	9598***	na	1173	10.39	2.84
1956	na	6070	195	4989	26	13290	10953***	na	2349	11.23	2.28
1955	na	5449	222	4874	22	11649	10578***	na	1071	9.63	2.28
1954	na	5280	139	3975	29	7979	7148***	na	831	10.87	2.63
1953	na	na	na	na	na	10680	8638***	na	2042	na	na
1952	na	11203	na	3815	na	13278	9261	-	4017	na	3.22
1951	54	11805	209	3776	18	14059	na	-	na	5.70	3.17
1950	54	12234	184	3079	17	14054	na	-	na	6.24	2.68
1949	na	na	na	na	na	10007	na	-	na	na	na
1948	na	na	na	na	na	13858	na	-	na	na	na
1947	na	na	na	na	na	15979	na	Shot	na	na	na
1946	39	13895	218	2376	11	13577	10455	562	2560	4.48	2.43

Note: (+) MA = Machine; CM = Continuous miner; LW = Longwall. (*) Includes longwall tonnage. (**) Includes longwall and continuous miner tonnage. (***) Includes continuous miner tonnage. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations. 1953 marked the first use of continuous mining equipment in Virginia; 1966 the first longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Virginia Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	LW*	MA*	CM*	Man Day	Ton
1988	341	6048	193	21395	111	23070	450	1967	20653	19.76	5.61
1987	373	6296	185	32015	173	23731	422	4203	18106	19.51	8.87
1986	420	6811	159	21261	134	20510	33	5206	15270	18.93	7.06
1985	437	6013	na	19265	na	22130	Hand	6614	15516	na	5.86
1984	476	6330	na	20124	na	23707	76	9905	13726	na	6.02
1983	402	5058	148	23229	157	19214	1	9159	10055	25.66	6.12
1982	522	6431	139	24660	177	21857	15	10072	11770	24.45	7.26
1981	510	6464	158	23372	148	22622	23	12002	10598	22.15	6.68
1980	485	6075	160	19921	125	19953	58	10642	9253	20.53	6.06
1979	510	5826	143	18774	131	17549	40	8697	8812	21.06	6.23
1978	501	5111	128	16720	131	13975	103	7132	6741	21.36	6.12
1977	512	5177	130	13868	107	13893	49	8501	5343	20.64	5.17
1976	432	4668	137	13992	102	13540	28	9312	4201	21.17	4.82
1975	407	4039	129	13355	104	10986	43	6652	4208	21.09	4.91
1974	331	3418	137	10968	80	10072	51	6842	3080	21.50	3.72
1973	299	3119	141	9149	65	9551	100	6303	3015	21.72	2.99
1972	301	2994	145	8180	56	8560	193	5831	2536	19.72	2.86
1971	381	3034	127	6823	54	8022	145	6172	1705	20.82	2.58
1970	572	3509	121	6103	50	10157	928	6954	2275	23.92	2.11
1969	691	4385	124	4612	37	12013	1656	8429	1928	34.06	1.68
1968	771	4648	131	4520	35	14059	3153	8694	2210	23.09	1.49
1967	923	5240	129	4326	34	14801	5541	7716	1543	21.89	1.53
1966	1232	6114	126	3765	30	16257	9271	6987*	na	21.10	1.42
1965	1437	7415	125	3588	29	17484	11899	5585*	na	18.86	1.52
1964	1572	8267	124	3377	27	17142	13747	3396*	na	16.72	1.63
1963	1609	8576	123	3156	26	16288	14219	2068*	na	15.44	1.66
1962	1549	8863	132	2941	22	16167	14605	1563*	na	13.82	1.61
1961	1586	8805	133	2612	20	14121	12507	1644*	na	12.08	1.63
1960	1604	8903	128	2491	19	13234	11678	1556*	na	11.61	1.68
1959	1669	9055	128	2447	19	13273	11417	1855*	na	11.45	1.67
1958	1562	8630	133	2470	19	12062	10346	1716*	na	10.51	1.77
1957	1375	9122	134	2715	20	13401	11165	2236*	na	10.96	1.85
1956	na	7024	142	2707	19	10393	8870	1510*	na	10.42	1.83
1955	na	6698	127	2182	17	8990	7677	1313*	na	10.57	1.63
1954	na	5269	133	1965	15	6239	5198	1041*	na	8.90	1.66
1953	na	na	na	na	na	6501	5383	1118*	na	na	na
1952	na	4571	na	2266	na	5297	4499	797	-	na	1.96
1951	349	3345	154	4211	27	4765	na	na	-	9.25	2.96
1950	141	1211	139	1411	10	4692	na	na	-	27.87	0.36
1949	na	na	na	na	na	4420	na	na	-	na	na
1948	na	na	na	na	na	2987	na	na	-	na	na
1947	na	na	na	na	na	2687	na	na	-	na	na
1946	na	na	na	na	na	1252	na	na	-	na	na

Note: (+) MA = Machine; CM = Continuous miner; LW = Longwall. (*) Includes continuous miner tonnage. No continuous miner equipment reported prior to 1953. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Virginia Coal Mine Productivity, Costs & Prices: 1988-1946
(Short Tons)

Year	Miners	Days	Production	Tons/Man Day	\$/Day	Wage(\$) Ton	Price(\$) Ton
1988	11096	208	46,364,647	20.09	114	5.68	na
1987	11766	211	45,537,960	18.34	142	7.78	na
1986	12525	177	41,768,142	18.84	141	7.47	na
1985	12621	207	42,376,484	16.22	106	6.54	30.16
1984	13689	224	41,424,753	13.51	114	8.44	31.17
1983	10414	148	35,506,056	23.04	173	7.52	31.86
1982	14008	134	40,481,288	21.57	185	8.59	34.57
1981	14238	137	41,977,807	21.52	176	8.18	34.96
1980	14399	142	41,008,884	20.06	155	7.70	34.58
1979	14777	133	37,038,148	18.85	146	7.74	35.99
1978	13415	133	31,911,283	17.89	142	7.94	30.50
1977	15742	134	37,513,131	17.78	117	6.61	29.65
1976	15124	138	39,995,546	19.16	148	7.74	24.12
1975	14231	130	35,505,780	19.19	112	5.82	30.46
1974	12302	123	34,283,753	22.66	99	4.38	24.94
1973	10890	122	33,869,387	25.49	93	3.66	11.12
1972	11071	121	33,995,841	25.38	79	3.11	10.11
1971	9756	115	30,624,954	27.30	82	2.99	8.32
1970	9905	118	34,974,724	29.92	72	2.41	7.03
1969	9617	124	36,651,536	30.73	57	1.87	5.42
1968	9454	133	36,865,703	29.31	48	1.62	4.84
1967	9677	135	36,415,214	27.87	43	1.52	4.66
1966	9893	131	35,572,928	27.44	39	1.41	4.31
1965	10716	129	34,063,404	24.64	35	1.41	4.09
1964	11431	128	31,773,217	21.72	33	1.50	3.89
1963	11811	126	30,389,798	20.42	31	1.54	3.96
1962	12137	134	29,469,945	18.12	28	1.55	3.99
1961	12437	135	28,156,370	16.77	26	1.53	4.16
1960	13635	130	26,706,285	15.07	25	1.68	6.35
1959	13779	129	28,223,508	15.88	27	1.70	4.68
1958	13592	134	25,030,954	13.74	25	1.83	4.86
1957	14988	136	28,528,081	14.00	28	2.01	5.22
1956	13590	142	26,004,732	13.47	26	1.96	4.92
1955	12514	133	21,833,801	13.12	25	1.93	4.60
1954	10888	134	15,172,285	10.40	22	2.14	4.45
1953	13075	184	18,679,726	7.76	20	2.52	5.34
1952	16164	199	20,729,692	6.44	17	2.65	5.32
1951	15535	164	19,999,358	7.85	24	3.01	5.42
1950	13640	155	17,591,498	8.32	19	2.28	5.49
1949	18341	156	16,007,867	5.59	na	na	5.65
1948	17247	225	19,214,475	4.95	na	na	6.01
1947	16132	251	20,368,123	5.03	10	1.97	4.83
1946	13895	218	15,753,424	5.20	11	2.10	3.84

Sources: *Virginia Division of Mines Annual Reports*, 1946-1988. U.S. Bureau of Mines *Minerals Yearbook*, 1946-1974. U.S. Department of Energy, Energy Information Administration (various reports), 1975-1987.

Virginia Coal Mine Productivity & Prices: 1945-1900
(Short Tons)

Year	Miners	Days	Production	Tons/Man Day	Price(\$) Ton
1945	14661	278	17,234,993	4.23	3.43
1944	16275	284	19,513,874	4.08	3.23
1943	17942	277	20,280,209	4.09	2.95
1942	19416	245	20,136,179	4.23	2.59
1941	16407	226	18,440,946	4.97	2.33
1940	17793	197	15,348,075	4.58	1.95
1939	15625	186	13,530,974	4.66	1.85
1938	16761	174	12,283,036	4.21	1.96
1937	16494	200	13,795,239	4.18	1.95
1936	14882	196	11,661,636	4.00	1.83
1935	13043	189	9,667,018	3.92	1.77
1934	12207	200	9,376,681	3.84	1.75
1933	9761	184	8,178,642	4.55	1.23
1932	10376	144	7,692,180	5.16	1.21
1931	11357	175	9,698,680	4.88	1.45
1930	11709	200	10,907,377	4.66	1.61
1929	12503	249	12,748,306	4.24	1.64
1928	12312	226	11,900,933	4.28	1.71
1927	13211	238	12,916,042	4.11	1.80
1926	13764	263	14,133,386	3.91	1.92
1925	13627	254	12,799,443	3.69	1.84
1924	12679	225	10,693,464	3.73	2.04
1923	14120	212	11,761,643	3.93	2.76
1922	13399	198	10,491,174	3.95	2.58
1921	11922	166	7,492,378	3.79	3.06
1920	14010	262	11,378,606	3.10	3.99
1919	11586	247	9,326,830	3.26	2.55
1918	11004	277	10,289,808	3.38	2.51
1917	11168	273	10,087,091	3.31	2.00
1916	9777	272	9,707,474	3.65	1.06
1915	8959	229	8,122,596	3.86	0.98
1914	9183	235	7,959,535	3.69	1.01
1913	9162	280	8,828,068	3.40	1.01
1912	8678	251	7,846,638	3.60	0.96
1911	7392	261	6,864,667	3.56	0.91
1910	7264	241	6,507,997	3.72	0.90
1909	6191	241	4,752,217	3.19	0.89
1908	6208	200	4,259,042	3.43	0.91
1907	6670	241	4,710,895	2.93	1.02
1906	5131	250	4,254,879	3.32	0.98
1905	5730	241	4,275,271	3.10	0.88
1904	5430	239	3,583,914	2.77	0.86
1903	5608	267	3,451,307	2.30	0.96
1902	3912	293	3,182,993	2.78	0.80
1901	4152	279	2,725,873	2.35	0.86
1900	3631	239	2,393,754	2.76	0.89

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1900-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1945.

Virginia Coal Mine Productivity & Prices: 1899-1880
(Short Tons)

Year	Miners	Days	Production	Tons/Man Day	Price(\$) Ton
1899	1960	252	2,105,791	4.26	0.62
1898	1855	230	1,815,274	4.25	0.59
1897	2344	213	1,528,302	3.06	0.67
1896	2510	198	1,254,723	2.52	0.68
1895	2158	225	1,368,324	2.82	0.63
1894	1635	254	1,229,083	2.96	0.76
1893	961	253	820,339	3.37	0.84
1892	836	192	675,205	4.21	0.86
1891	820	246	736,399	3.65	0.83
1890	1295	296	784,011	2.05	0.75
1889	1555	na	865,786	na	0.93
1888	na	na	1,073,000	na	1.00
1887	na	na	825,263	na	0.94
1886	na	na	684,951	na	0.85
1885	na	na	567,000	na	na
1884	na	na	336,000	na	na
1883	241	na	252,000	na	0.89
1882	na	na	112,000	na	na
1881	na	na	50,000	na	na
1880	80	na	43,079	na	na

Source: U.S. Geological Survey *Mineral Resources* (annual), 1880-1899.

Virginia Coal Miners/Office Workers Wages & Costs: 1988-1946

Year	Miners	Days	Total Wages	Average Wages		Wage(\$) Ton	Office Workers		
				\$/Year	\$/Day		Total Wages	#	\$/Year
1988	11096	208	263,154,959	23716	114	5.68	8,899,893	408	21813
1987	11766	211	352,542,862	29963	142	7.78	8,069,709	501	16107
1986	12525	177	311,829,472	24897	141	7.47	16,139,510	470	34339
1985	12621	207	294,984,647	23373	106	6.54	11,367,583	965	11780
1984	13689	224	325,967,981	23812	114	8.44	33,841,273	963	35142
1983	10414	148	267,132,174	25651	173	7.52	10,685,536	558	19150
1982	14008	134	347,488,417	24806	185	8.59	9,661,354	545	17727
1981	14238	137	343,280,607	24110	176	8.18	9,598,139	572	16780
1980	14399	142	316,008,500	21945	155	7.70	7,417,038	591	12550
1979	14777	133	286,911,045	19416	146	7.74	7,340,209	628	11688
1978	13415	133	253,513,399	18897	142	7.94	9,106,295	735	12390
1977	15742	134	247,823,075	15743	117	6.61	18,982,416	806	23551
1976	15124	138	231,458,678	20461	148	7.74	6,434,026	672	9574
1975	14231	130	206,635,457	14520	112	5.82	4,879,145	597	8173
1974	12302	123	150,289,764	12216	99	4.38	3,393,965	556	6104
1973	10890	122	124,092,635	11395	93	3.66	2,270,357	444	5113
1972	11071	121	105,623,777	9541	79	3.11	2,143,933	498	4305
1971	9756	115	91,587,259	9388	82	2.99	2,469,140	463	5333
1970	9905	118	84,137,013	8494	72	2.41	4,573,209	539	8485
1969	9617	124	68,429,691	7115	57	1.87	1,857,678	422	4402
1968	9454	133	59,838,743	6329	48	1.62	1,468,867	379	3876
1967	9677	135	55,516,526	5737	43	1.52	1,760,157	261	6744
1966	9893	131	50,036,166	5058	39	1.41	1,922,455	275	6991
1965	10716	129	48,152,151	4493	35	1.41	2,749,591	632	4351
1964	11431	128	47,555,500	4160	33	1.50	2,323,498	519	4477
1963	11811	126	46,676,518	3952	31	1.54	2,386,571	581	4108
1962	12137	134	46,649,410	3753	28	1.55	2,625,390	695	3778
1961	12437	135	43,019,696	3459	26	1.53	2,815,764	700	4023
1960	13635	130	44,764,667	3283	25	1.68	2,896,366	661	4382
1959	13779	129	48,039,085	3486	27	1.70	3,049,586	742	4110
1958	13592	134	45,867,811	3375	25	1.83	3,064,765	769	3985
1957	14988	136	57,394,377	3829	28	2.01	2,299,952	705	3262
1956	13590	142	51,044,842	3756	26	1.96	2,114,497	647	3268
1955	12514	133	42,236,702	3375	25	1.93	2,131,725	742	2873
1954	10888	134	32,529,282	2988	22	2.14	1,437,057	521	2758
1953	13075	184	47,126,460	3604	20	2.52	2,454,703	704	3487
1952	16164	199	54,928,743	3398	17	2.65	2,773,754	842	3294
1951	15535	164	60,160,413	3873	24	3.01	2,056,323	660	3116
1950	13640	155	40,073,277	2938	19	2.28	2,064,033	699	2953
1949	18341	156	na	na	na	na	na	na	na
1948	17247	225	na	na	na	na	na	na	na
1947	16132	251	40,114,000	2487	10	1.97	na	na	na
1946	13895	218	33,011,204	2375	11	2.10	1,517,670	565	2686

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Office Workers at Virginia Underground Coal Mines: 1988-1946

Year	Tipple Mines		Truck Mines	
	#	\$/Year	#	\$/Year
1988	55	28520	254	20384
1987	62	29842	245	11658
1986	66	23911	252	35908
1985	68	26265	475	10053
1984	113	28611	601	41880
1983	83	25980	307	17474
1982	103	24379	331	17094
1981	115	21389	270	14947
1980	169	14773	267	11715
1979	154	13099	265	9159
1978	179	14462	284	6613
1977	248	15468	272	5719
1976	207	14522	217	5344
1975	125	12455	212	4612
1974	141	11636	176	3620
1973	133	10129	151	2704
1972	125	8764	181	2566
1971	178	9679	158	2409
1970	200	19449	218	1517
1969	124	7703	225	1445
1968	103	7585	229	1308
1967	163	7358	65	4544
1966	181	7492	65	4758
1965	261	7654	314	1371
1964	221	8484	258	1000
1963	223	8459	290	895
1962	282	7787	359	747
1961	324	7317	328	897
1960	327	7652	294	900
1959	361	7050	320	931
1958	378	6638	350	1019
1957	276	6697	389	874
1956	314	5629	297	766
1955	488	3870	236	787
1954	305	3841	193	949
1953	na	na	na	na
1952	596	4001	206	803
1951	503	3688	132	670
1950	544	3557	46	1103
1949	na	na	na	na
1948	na	na	na	na
1947	na	na	na	na
1946	565	2686	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Virginia Coal Mine Strikes & Work Stoppages: 1988-1895

Year	Dates	Length	# Men	Comments
1989	4/5 ?	-	1600	Pittston
1988	-	-	-	Work Stoppages
1981	3/27-6/6	10 weeks	UMWA	
1977-1978	11/12-3/27	111 days	UMWA	
1974	11/12-12/6	24 days	UMWA	
1972	na	72 days	UMWA	
1971	10/1-11/13	44 days	UMWA	
1969	-	-	-	Work Stoppages
1968	9/14-10/14	31 days	UMWA	
1966	4/11-4/27	17 days	UMWA	
1965	-	-	-	Work Stoppages
1952	-	-	-	Work Stoppages
1949	-	-	-	Work Stoppages
1948	-	-	-	Work Stoppages
1946	-	-	-	Work Stoppages
1942	na	6 days	5536	
1941	na	23 days	14372	
1940	na	3 days	493	
1939	4/5-5/17	40 days	11621	
1934	na	8 days	3701	
1933	na	17 days	3226	
1932	na	1 day	140	
1929	na	8 days	110	
1922	na	9 days	240	
1920	na	36 days	48	
1919	11/1-12/12	24 days	547	
1918	na	20 days	523	
1917	na	272 days	37	
1916	na	10 days	232	
1915	na	na	7	
1902	na	na	205	
1901	na	na	175	
1897	4/1-4/15	15 days	300	Tom's Creek
1897	7/10-7/25	16 days	300	Tom's Creek
1895	na	na	na	Pocohontas

Sources: *Virginia Division of Mines Annual Reports*, 1946-1988. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1975. U.S. Geological Survey *Mineral Resources* (annual), 1895-1931.

Virginia Coal Mines, Miners & Safety: 1988-1946

Year	Mines	Miners	Days	Fatalities		Injuries		Lost Days	
				#	Rate	#	Rate	#	Rate
1988	545	11096	208	4	0.05	1116	47.5	na	na
1987	606	11766	211	3	0.07	1051	44.7	na	na
1986	657	12525	177	11	0.26	865	32.3	na	na
1985	681	12621	207	8	0.19	745	27.2	na	na
1984	741	13689	224	10	0.24	716	30.3	na	na
1983	626	10414	148	12	0.34	549	28.1	12295	629
1982	828	14008	134	17	0.42	716	28.0	30266	1183
1981	881	14238	137	16	0.38	1004	36.7	38706	1414
1980	867	14399	142	12	0.29	1368	48.1	50464	1775
1979	884	14777	133	16	0.43	1162	42.6	43987	1613
1978	900	13415	133	17	0.53	963	40.8	32653	1383
1977	1068	15742	134	13	0.35	828	29.1	29626	1042
1976	985	15124	138	16	0.40	803	28.2	27546	966
1975	981	14231	130	9	0.25	745	27.2	20806	760
1974	843	12302	123	15	0.44	579	25.5	15803	696
1973	729	10890	122	18	0.53	741	34.5	12243	570
1972	751	11071	121	15	0.44	na	53.5	na	11905
1971	787	9756	115	15	0.49	na	49.8	na	10101
1970	905	9905	118	27	0.77	na	52.2	na	13542
1969	912	9617	124	15	0.42	na	38.6	na	8124
1968	997	9454	133	12	0.32	na	34.7	na	5004
1967	1102	9677	135	24	0.66	806	45.7	203881	11560
1966	1418	9893	131	30	0.84	882	48.5	226346	12781
1965	1597	10716	129	25	0.73	989	49.0	216319	10718
1964	1713	11431	128	22	0.69	1037	49.8	186614	8962
1963	1747	11811	126	25	0.82	973	45.8	203080	9574
1962	1677	12137	134	22	0.75	1108	37.5	177758	6015
1961	1696	12437	135	30	1.07	1561	55.4*	na	na
1960	1728	13635	130	22	0.82	1677	62.8*	na	na
1959	1807	13779	129	22	0.78	1400	49.6*	na	na
1958	1703	13592	134	30	1.20	1566	62.6*	na	na
1957	1505	14988	136	37	1.39	na	na	na	na
1956	1089	13590	142	35	1.34	na	na	na	na
1955	1059	12514	133	33	1.51	1457	66.7*	na	na
1954	555	10888	134	23	1.51	1176	77.6*	na	na
1953	293	13075	184	31	1.65	na	na	na	na
1952	315	16164	199	21	1.01	747	35.5*	na	na
1951	419	15535	164	37	1.84	690	34.2*	na	na
1950	212	13640	155	26	1.47	591	33.3*	na	na
1949	335	18341	156	27	1.67	711	40.0*	na	na
1948	247	17247	225	50	2.58	925	47.7*	na	na
1947	267	16132	251	41	2.01	1059	52.0*	na	na
1946	139	13895	218	49	3.11	1111	70.5*	na	na

Rates: Fatality rates are number of deaths per million tons of coal mined. Injury rates are number of lost-time injuries per million miner-hours worked (where marked (*) injury rate is number of lost-time injuries per million tons mined). Severity rates (last two columns) are lost work days per million miner-hours worked.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Virginia Coal Mines, Miners & Safety: 1945-1901

Year	Mines	Miners	Days	Fatalities			Injuries		
				#	Ton Rate	Hr. Rate	#	Ton Rate	Hr. Rate
1945	145	14661	278	46	2.63	2.61	1187	65	67.2
1944	na	16275	294	45	2.27	2.26	1371	70	69.0
1943	136	17942	277	57	2.76	2.76	1483	73	71.8
1942	152	19416	245	49	2.42	1.49	2454	118	74.7
1941	155	16407	226	55	2.95	1.83	1884	101	62.9
1940	128	14793	199	46	2.88	1.83	1970	126	80.2
1939	112	15625	na	38	2.74	1.67	1590	114	69.9
1938	126	16761	174	92	7.38	4.46	1447	116	70.2
1937	127	16491	200	47	3.29	1.88	1542	108	61.5
1936	na	14882	196	40	3.38	1.92	1557	131	74.6
1935	85	13043	189	30	3.10	1.74	1638	169	94.9
1934	86	12907	200	47	5.01	2.62	1398	149	77.8
1933	80	9761	184	23	2.81	1.59	842	103	58.1
1932	77	10376	144	74	9.62	6.16	912	118	75.9
1931	82	11357	175	31	3.19	1.81	1400	144	81.7
1930	74	11709	200	46	4.22	2.43	1670	153	88.2
1929	79	12503	249	43	3.37	3.78	2195	193	192.8
1928	na	12312	226	41	3.45	na	na	na	na
1927	98	13211	238	44	3.41	na	na	na	na
1926	109	13764	263	59	4.17	na	na	na	na
1925	113	13627	254	46	3.59	na	na	na	na
1924	115	12679	225	39	3.65	1.70	na	na	na
1923	157	14120	212	39	3.32	1.60	na	na	na
1922	148	13399	198	25	2.38	1.17	na	na	na
1921	105	11922	166	17	2.27	1.07	na	na	na
1920	131	14010	262	26	2.28	0.87	na	na	na
1919	144	11586	247	34	3.65	1.47	na	na	na
1918	109	11004	277	43	4.18	1.71	na	na	na
1917	83	11168	273	63	6.25	2.24	na	na	na
1916	67	9777	272	53	5.46	1.91	na	na	na
1915	na	8959	229	48	5.91	2.29	na	na	na
1914	na	9183	235	27	3.39	1.27	na	na	na
1913	63	9162	280	24	2.72	0.94	na	na	na
1912	60	8678	251	75	9.56	3.46	na	na	na
1911	61	7392	261	68	9.91	3.26	603	88	28.9
1910	63	7564	241	57	8.76	na	na	na	na
1909	na	6191	na	27	6.52	na	373	79	na
1908	32	6208	200	na	na	na	na	na	na
1907	na	6670	241	11	2.33	na	na	na	na
1906	na	5131	250	35	8.23	na	na	na	na
1905	na	5730	241	na	na	na	na	na	na
1904	na	5430	239	na	na	na	na	na	na
1903	na	5608	267	na	na	na	na	na	na
1902	na	3912	293	75	23.50	na	na	na	na
1901	na	4152	279	17	6.24	na	na	na	na

Rates: Tonnage rate for fatalities and injuries is per million tons mined. Hourly rate is per million miner hours worked.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1901-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1945.

Virginia Coal Mine Explosions (Causing Injury or Fatality): 1983-1944

Year	Date	Mine	Location	Injuries	Fatalities
1983	June 21	McClure		0	7
1979	January 15	#13 O & G		4	0
1977	July 7	#1 P & P		0	4
1975	June 4	Virginia Pocahontas #4		2	0
1974	December 4	Virginia Pocahontas #2		1	0
1973	November 9	Virginia Pocahontas #2		1	0
1972	April 19	\$6 Sue		2	0
1972	March 10	Virginia Pocahontas #1		2	0
1971	March 16	Virginia Pocahontas #4		2	0
1970	October 28	Virginia Pocahontas #2		1	0
1970	September 2	Lambert Fork		1	0
1970	August 28	Lambert Fork		2	0
1970	June 2	#3 Kem		1	0
1970	January 6	Moss #2		1	0
1969	October 15	Moss #2		1	0
1969	August 18	Virginia Pocahontas #1		3	0
1968	August 30	Moss #2		2	0
1968	May 8	Virginia Pocahontas #1		2	0
1968	January 24	#6 Pearly		1	2
1967	September 6	Hern & Whited		6	0
1967	March 6	Beatrice		3	0
1967	January 24	Zeni-McKenney-Williams		5	3
1967	January 24	Virginia Pocahontas #1		4	3
1966	December 2	Moss #2		1	0
1966	November 7	#5 Wade		1	0
1966	April 19	Moss #2		1	0
1965	September 27	Moss #2		1	0
1965	August 27	Moss #2		1	0
1962	November 21	#5		4	0
1962	September 28	Moss #3		1	0
1962	August 9	#1 Grimsleyville		1	0
1961	July 29	#5 (Phillips)		2	1
1961	May 16	Moss #2		1	0
1957	na	Bishop	Bishop	na	37
1952	January 22	Seaboard #5	Seaboard	2	0
1949	October 28	Barrett #1	Clintwood	2	0
1949	June 3	Blankenship	Whitewood	3	0
1948	January 23	Rowe	Rowe	1	0
1945	March 13	Victor	Virginia	2	0
1944	December 11	Norton #11	Norton	0	2

Sources: Humphrey, H.B. 1959. *Historical Summary of Coal Mine Explosions in the United States 1810-1958*, U.S. Bureau of Mines Bulletin 586. Richmond, J.K. et al. *Historical Summary of Coal Mine Explosions in the United States 1959-1981*, U.S. Bureau of Mines Information Circular 8909.

Virginia Coal Mine Explosions (Causing Injury or Fatality): 1938-1810

Year	Date	Mine Operation	Location	Injuries	Fatalities
1938	na	Red Jacket	na	na	45
1934	August 6	Derby #3	Big Stone Gap	na	17
1932	June 13	Splashdam #6	Splashdam	na	10
1932	February 27	Boissevein	Boissevein	na	38
1932	January 18	Parrott	Parrott	na	6
1912	July 16	Carbon Hill	Gayton	na	8
1912	January 16	Carbon Hill	Gayton	na	5
1911	January 20	Carbon Hill	Gayton	na	7
1910	January	Carbon Hill	Gayton	na	6
1909	na	Carbon Hill	Gayton	na	6
1906	na	West	Pocahontas	na	36
1884	March 13	Laurel	Pocahontas	0	112
1882	February 3	Grove Shaft	Midlothian	na	32
1881	na	Grove Shaft	Midlothian	na	na
1876	May 20	Grove Shaft	Midlothian	na	8
1875	na	Raccoon	Winterpock	na	3
1872	na	na	na	2	na
1867	April 3	Brighthope	Winterpock	na	69
1863	na	Raccoon	Winterpock	na	17
1862	na	Midlothian	Midlothian	na	na
1860	na	na	na	1	0
1859	April 13	Brighthope	Winterpock	na	9
1855	na	Brighthope	Winterpock	na	na
1855	November	Black Heath	Clover Hill	na	3
1855	March 19	Midlothian	Midlothian	na	55
1854	na	English	Chesterfield	na	na
1854	May 15	English	Chesterfield	na	20
1851	na	English	Chesterfield	na	na
1850	na	Brighthope	Winterhope	1	na
1850	na	Co	Clover Hill	na	7
1844	na	Black Heath	Clover Hill	na	11
1840	Several	Wills Pits	Midlothian	some	some
1839	Several	Maidenhead	Chesterfield	3	53
1839	March 18	Black Heath	Clover Hill	na	40
1836	na	Chesterfield	Chesterfield	some	some
1835	na	Bell Shaft	Midlothian	na	na
1826	na	na	na	na	some
1818	na	Heath Pits	Chesterfield	na	some
1817	na	Wills Pits	Midlothian	some	0
1810	na	Heath Pits	Chesterfield	some	some

Sources: Davies, J.R. and Humphrey, H.B. 1934. *Explosions in Virginia Coal Mines 1839-1933*, U.S. Bureau of Mines Information Circular 6766. Humphrey, H.B. 1959. *Historical Summary of Coal Mine Explosions in the United States 1810-1958*, U.S. Bureau of Mines Bulletin 586.

Virginia Mining Equipment Use & Cleaning Facilities: 1975-1935

Year	Underground Production Units					Surface Units		Cleaning Plants
	Cutting	Loading	Haulage	CM*	LW*	Auger	Strip	
1975	214	206	188	213	8	101	416	23
1974	235	233	196	202	10	103	355	19
1973	283	294	224	180	11	118	261	32
1972	na	314	na	161	8	139	267	31
1971	310	266	250	139	7	110	244	30
1970	441	366	170	109	4	107	181	33
1969	440	365	153	118	5	88	96	33
1968	496	335	240	98	4	82	99	33
1967	598	316	183	94	2	64	76	37
1966	669	265	237	80	1	71	76	36
1965	836	178	412	56	0	63	64	33
1964	961	127	398	44	0	59	48	29
1963	707	149	502	37	0	53	49	29
1962	859	146	627	10	0	41	47	24
1961	902	179	na	36	0	35	38	22
1960	955	201	1072	17	0	35	46	28
1959	965	177	na	17	0	37	44	29
1958	979	186	1036	18	0	44	45	30
1957	984	171	na	18	0	24	48	30
1956	813	187	983	11	0	25	32	27
1955	820	193	880	9	0	21	31	27
1954	475	168	802	5	0	8	19	29
1953	495	144	732	2	0	3	27	37
1952	na	148	673	0	0	1	31	31
1951	549	184	714	0	0	0	25	29
1950	548	190	na	0	0	0	19	29
1949	545	na	na	0	0	0	18	21
1948	461	312	na	0	0	0	18	21
1947	438	286	na	0	0	0	15	18
1946	380	241	510	0	0	0	15	18
1945	368	205	na	0	0	0	8	20
1944	366	172	na	0	0	0	2	20
1943	376	181	na	0	0	0	0	21
1942	361	152	na	0	0	0	0	22
1941	329	152	na	0	0	0	0	22
1940	295	89	577	0	0	0	0	19
1939	302	70	na	0	0	0	0	na
1938	276	30	na	0	0	0	0	na
1937	239	20	na	0	0	0	0	na
1936	253	15	504	0	0	0	0	na
1935	238	9	na	0	0	0	0	na

Note: (*) CM = Continuous miner; LW = Longwall.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1935-1975.

Virginia Mining Equipment Use & Cleaning Facilities: 1934-1888

Year	Cutting	Loading	Haulage	Year	Cutting	Cleaning Plants
1934	218	3	na	1910	142	3
1932	233	8	na	1909	107	3
1931	236	8	na	1908	85	4
1930	239	8	na	1907	77	7
1929	261	14	na	1906	37	3
1928	267	13	na	1905	35	na
1927	281	na	na	1904	18	na
1926	269	17	na	1903	10	na
1925	280	4	na	1902	11	na
1924	282	5	514	1901	6	na
1923	277	7	na	1900	9	na
1922	264	na	na	1899	8	<u>Picks*</u>
1921	257	na	na	1898	8	0
1920	248	na	na	1897	8	8
1919	232	na	na	1896	10	10
1918	231	na	na	1895	63	14
1917	226	na	na	1894	118	21
1916	194	na	na	1893	82	14
1915	186	na	na	1892	51	26
1914	182	na	na	1891	27	10
1913	187	na	na	1890	25	10
1912	185*	na	na	1889	15	3
1911	156**	na	na	1888	10	0

Note: (*) 128 chain breast, 51 shortwall, 5 punchers. (**) 121 chain breast, 35 shortwall, 0 punchers. Picks are mechanical cutters.

Sources: U.S. Geological Survey *Mineral Resources* (annual) 1888-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1934.

Virginia Coal Rail Shipments: 1988-1946
(Million Tons)

Year	Railroads							
	NS	N&W	SOU	INT	CSX	C&O	CC&O	L&N
1988	38	-	-	-	8	-	-	-
1987	38	-	-	-	8	-	-	-
1986	35	-	-	-	7	-	-	-
1985	36	-	-	-	6	-	-	-
1984	34	-	-	-	7	-	-	-
1983	29	-	-	-	7	-	-	-
1982	33	-	-	-	7	-	-	-
1981	34	-	-	-	8	-	-	-
1980	35	To NS	To NS	-	6	To CSX	To CSX	To CSX
1979	0	21	10	-	-	0	6	0
1978	0	19	10	-	-	0	6	0
1977	0	15	5	-	-	0	5	0
1976	0	19	10	-	-	0	6	0
1975	0	18	8	-	-	0	5	0
1974	0	17.7	7.8	To SOU	-	0	4.7	0.1
1973	0	19.0	5.2	3.2	-	0	5.2	0.1
1972	0	18.6	3.8	3.5	-	0	5.1	0.1
1971	0	18.1	2.5	3.7	-	0	3.7	0.1
1970	0	20.7	3.6	4.6	-	0.01	4.2	0.2
1969	0	22.8	2.5	4.7	-	0	3.9	0
1968	0	22.5	1.7	5.3	-	0	4.8	0.3
1967	0	22.0	0.8	5.3	-	0	5.3	0.3
1966	0	20.4	0.5	4.7	-	0.04	4.8	0.03
1965	0	20.1	0.4	4.6	-	0.04	4.2	0.1
1964	0	19.9	0.4	3.6	-	0.2	3.3	0
1963	0	19.6	0.4	3.2	-	0.01	3.2	0.03
1962	0	19.0	0.3	2.7	-	0.03	3.0	0
1961	0	18.4	0.3	3.1	-	0.1	2.8	1.9
1960	0	17.7	0.4	3.3	-	0	2.9	0.1
1959	0	16.2	0.3	4.0	-	0	3.8	0.1
1958	0	19.0	0.7	4.2	-	0	4.1	0.2
1957	0	14.9	0.7	4.4	-	0.1	5.9	0.1
1956	0	13.1	0.8	4.9	To N&W	1.0	4.9	0.2
1955	0	11.1	0.7	3.5	VGN	0.8	4.5	0.3
1954	0	7.8	0.4	1.8	0.01	0.5	3.6	0.1
1953	0	8.7	0.8	1.9	0.07	1.0	5.1	0.2
1952	0	10.0	1.3	1.6	0.08	1.0	5.2	0.3
1951	0	10.1	1.1	2.2	0.11	0.9	5.3	0.3
1950	0	8.3	1.0	2.3	0.11	0.4	4.4	0.3
1949	0	7.1	0.6	1.8	0.11	0.2	3.7	0.2
1948	0	9.4	0.9	2.5	0.16	0	4.0	0.4
1947	0	10.7	0.9	2.5	0.15	0	4.9	0.2
1946	0	8.8	0.8	2.3	0.17	0	2.6	0.2

Railroads: NS = Norfolk Southern; N&W = Norfolk & Western; SOU = Southern; INT = Interstate; CSX = CSX Transportation; C&O = Chesapeake & Ohio; CC&O = Carolina, Clinchfield & Ohio; L&N = Louisville & Nashville; VGN = Virginian.

Sources: U.S. Bureau of Mines *Minerals Yearbook*, 1946-1974; National Coal Association *Coal Traffic* (annual), 1975-1988.

Virginia Coal Rail Shipments: 1945-1914
(Million Tons)

Year	Railroads							
	N&W	SOU	INT	N&N	V&K	CC&O	L&N	VGN
1945	9.7	1.1	2.7	-	-	2.7	0.2	0.17
1944	11.2	1.2	2.9	-	-	2.9	0.2	0.17
1943	11.5	1.4	2.8	-	-	3.1	0.4	0.19
1942	11.0	1.6	2.9	-	-	3.0	0.4	0.18
1941	9.9	1.4	2.5	-	-	2.9	0.5	0.18
1940	8.5	1.2	2.0	-	-	0.1	0.4	0.14
1939	7.4	1.5	1.9	-	-	0.1	0.2	0.14
1938	7.0	1.1	1.7	-	-	1.7	0.1	na
1937	6.3	1.3	1.7	-	-	1.7	0.2	na
1936	5.7	1.5	1.7	-	-	1.8	0.2	0.12
1935	4.3	1.4	1.6	-	-	1.6	0.2	0.11
1934	3.9	1.6	1.6	-	-	1.8	0.2	0.07
1933	2.9	1.5	1.6	-	-	1.6	0.3	0.07
1932	2.5	1.7	1.5	-	-	1.3	0.4	0.11
1931	3.0	2.3	1.8	-	-	1.8	0.3	0.07
1930	3.5	2.4	2.2	To INT	-	2.0	0.2	0.11
1929	3.9	3.1	2.7	0.04	-	2.0	0.3	0.10
1928	3.4	3.2	2.5	0.04	-	1.8	0.4	0.06
1927	3.4	3.2	2.9	0.08	-	2.3	0.3	0.03
1926	3.9	3.3	3.1	0.10	-	2.7	0.3	0.03
1925	3.5	2.8	2.9	0.12	-	2.6	0.3	0.02
1924	2.8	2.3	2.3	0.10	-	2.1	0.2	0.01
1923	2.7	2.1	2.5	0.08	-	2.7	0.3	0.01
1922	3.0	1.6	2.1	0.09	-	2.6	0.2	0.01
1921	2.1	1.3	1.6	0.01	-	1.8	0.04	0.02
1920	2.8	2.0	1.9	0.03	-	2.4	0.2	0.01
1919	2.3	1.2	1.2	0.08	-	2.1	0.6	0.0+
1918	2.9	1.6	1.5	0.09	-	1.9	0.2	na
1917	2.7	1.4	1.5	0.07	To N&N	1.9	0.1	0.0+
1916	2.8	1.4	1.2	0	0.03	1.9	0.2	na
1915	2.6	2.0	1.0	0	0.04	1.2	0.2	na
1914	2.6	1.3	1.0	0	0	1.3	0.2	0.0+

Railroads: N&W = Norfolk & Western; SOU = Southern; INT = Interstate; N&N = Norton & Northern; V&K = Virginia & Kentucky; CC&O = Carolina, Clinchfield & Ohio; L&N = Louisville & Nashville; VGN = Virginian.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1914-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1945.

Virginia Coal Rail Shipments: 1913-1876
(Million Tons)

Year	Railroads				
	N&W	SOU	INT	CC&O	L&N
1913	2.5	1.3	0.9	1.6	0.2
1912	2.2	1.3	0.8	1.4	0.4
1911	2.2	1.2	0.5	1.1	0.2
1910	1.3	1.2	0.4	1.0	0.2
1909	1.3	V&SW	na	na	na
1908	1.2	na	na	na	na
1907	1.0	na	na	na	na
1906	0.6	na	na	0	na
1905	1.0	na	na	0	na
1904	1.2	na	0	0	na
1903	1.5	na	0	0	na
1902	1.4	na	0	0	na
1901	1.4	na	0	0	na
1900	1.3	na	0	0	na
1899	1.2	na	0	0	na
1898	1.0	na	0	0	na
1897	1.0	na	0	0	na
1896	0.8	na	0	0	na
1895	1.0	na	0	0	na
1894	1.0	na	0	0	na
1893	0.7	SA&O	0	0	na
1892	0.5	na	0	0	na
1891	0.6	0	0	0	0
1890	0.6	0	0	0	0
1889	0.7	0	0	0	0
1888	0.6	0	0	0	0
1887	0.5	0	0	0	0
1886	0.5	0	0	0	0
1885	0.4	0	0	0	0
1884	0.3	0	0	0	0
1883	0.1	0	0	0	0
1882	na	0	0	0	0
1881	C&M	CH	R&P	RF&P	R&D
1880	0.01	0.02	0.01	na	na
1879	na	na	0.01	na	na
1878	na	na	0.01	na	na
1877	na	0.04	na	na	0.01
1876	na	0.03	0.01	na	0.03

Railroads: N&W = Norfolk & Western; SOU = Southern; INT = Interstate; CC&O = Carolina, Clinchfield & Ohio; L&N = Louisville & Nashville; SA&O = South Atlantic & Ohio; V&SW = Virginia & Southwestern; C&M = Chesterfield; CH = Clover Hill; R&P = Richmond & Petersburg; RF&P = Richmond, Fredericksburg & Potomac; R&D = Richmond & Danville.

Sources: U.S. Geological Survey Mineral Resources (annual), 1883-1913. Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.

Virginia Coal Rail Shipments: 1875-1836
(Thousand Tons)

Year	Railroads				
	C&M	CH	R&P	RF&P	R&D
1875	na	43.7	39.1	5.4	25.8
1874	na	36.5	35.2	7.1	30.3
1873	na	40.0	37.6	3.3	54.5
1872	na	47.3	42.2	1.0	45.2
1871	na	47.0	42.0	2.9	45.0
1870	na	23.6	38.9	7.3	34.4
1869	na	39.7	35.5	9.4	24.9
1868	na	27.2	24.3	2.9	19.6
1867	na	18.4	16.4	6.5	22.9
1866	na	20.5	18.3	na	25.9
1865	na	5.3	4.7	na	42.0
1864	na	40.8	36.4	na	42.2
1863	na	41.6	37.2	na	42.0
1862	na	56.7	50.6	na	29.1
1861	na	49.5	45.2	0.5	18.4
1860	na	48.0	46.9	3.6	32.3
1859	na	50.4	45.9	4.0	30.8
1858	na	54.9	49.0	4.0	29.9
1857	na	50.2	50.4	4.0	24.3
1856	na	47.2	36.9	na	38.8
1855	na	61.0	45.4	na	35.6
1854	na	59.9	53.5	na	43.5
1853	na	65.0	52.1	na	15.6
1852	na	59.8	na	na	35.0
1851	31.0	56.0	na	na	17.4
1850	46.1	43.1	na	na	na
1849	53.2	56.5	na	na	na
1848	62.1	58.8	na	na	na
1847	65.3	51.3	na	18.0	na
1846	77.0	18.0	na	18.0	na
1845	na	14.3	na	18.0	na
1844	39.8	14.3	na	18.0	na
1843	25.3	14.3	na	18.0	na
1842	30.6	na	na	18.0	na
1841	36.4	na	na	18.0	na
1840	na	na	na	18.0	na
1839	38.3	na	na	18.0	na
1838	38.6	na	na	12.0	na
1837	na	na	na	6.0	na
1836	85.0	na	8.0	na	na

Railroads: C&M = Chesterfield; CH = Cloverhill; R&P = Richmond & Petersburg; RF&P = Richmond, Fredericksburg & Potomac; R&D = Richmond & Danville.

Source: Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co.

Virginia Steam Coal Rail Rates (N&W) & Coal Prices: 1962-1981

Year	Steam Coal Rate Increase		Virginia Coal Price		Del. Cost Increase	
	Actual	Index	Actual	Index	Actual	Index
1962	\$ 1.71	100	\$ 3.99	100	\$ 5.70	100
1963	1.71	100	3.96	99	5.67	99
1964	1.71	100	3.89	98	5.60	98
1965	1.71	100	4.09	103	5.80	102
1966	1.71	100	4.31	108	6.02	106
1967	1.86	109	4.66	117	6.52	114
1968	1.95	114	4.84	121	6.79	119
1969	2.07	121	5.42	136	7.49	131
1970	2.37	139	7.03	176	9.40	165
1971	2.50	146	8.32	209	10.82	190
1972	2.60	152	10.11	253	12.71	223
1973	2.73	160	11.12	279	13.85	243
1974	3.26	191	24.94	625	28.20	495
1975	3.75	219	30.46	763	34.21	600
1976	4.01	235	24.12	605	28.13	494
1977	4.38	256	29.65	743	34.03	597
1978	4.97	290	30.50	764	35.47	622
1979	5.75	336	35.99	902	41.74	732
1980	6.64	388	34.58	867	41.22	723
1981	7.41	433	30.63	768	38.04	667

Note: Rail rates are specific to each combination of origin and destination. Rates depend on gathering facilities at the mine; single car or unit trains; distance; trackage of other railroads needed; turn-around time at destination; switching required to reach destination; accumulated tonnage shipped to destination; and competition. Since federal rail deregulation with the 1980 Staggers Act, rail contracts have been negotiated by coal buyers, and may include confidential discounts or rebates.

Sources: U.S. Energy Information Administration, *Coal Production* (annual), 1981-1976. U.S. Bureau of Mines *Minerals Yearbook*, 1962-1975.

Virginia Coal Distribution & Transport: 1984-1915
(Million Tons)

Year	Utility	Industry	Res/Com	Hampton Roads	Lake Erie	Coal to Coke	Local	Ship Cargo	Rail	TOTAL
1984	16.0	14.9	0.3	9.1	na	na	na	na	na	40.3
1983	13.1	12.5	0.3	8.5	na	na	na	na	na	34.5
1982	14.5	11.6	0.3	12.7	na	na	na	na	na	39.1
1981	11.9	17.4	0.1	11.2	na	na	na	na	na	40.6
1980	12.9	15.9	0.2	11.6	na	na	na	na	na	40.6
1979	12.7	15.8	0.2	8.1	na	na	na	na	na	36.8
1978	11.7	15.9	0.2	3.7	na	na	na	na	na	31.5
1977	13.1	18.3	0.4	5.8	na	na	na	na	na	37.6
1976	13.0	18.9	0.4	7.7	na	na	na	na	na	40.0
1975	13.2	13.1	0.3	8.9	na	na	na	na	na	35.5
1970	3.6	2.4	na	na	na	4.7	na	na	na	35.0
1954	11.1	na	na	1.5	0.8	1.6	0.1	0.04	na	15.1
1953	8.1	3.7	na	2.3	1.1	3.3	0.3	0.07	na	18.8
1952	13.2	na	na	4.1	0.9	3.1	0.3	0.1	na	21.6
1951	12.5	na	na	4.8	1.0	3.1	0.1	0.2	na	21.4
1947	na	7.3	na	na	na	na	na	na	na	20.4
1941	na	na	na	na	na	1.4	na	na	na	18.4
1929	0.8	1.9	na	na	na	0.5	0.1	na	na	12.1
1918	5.2	na	na	na	na	2.0	0.1	na	na	9.8
1917	2.6	0.6	na	na	na	2.1	0.1	0.6	2.7	10.4
1915	na	na	na	na	na	1.0	0.1	0.6	2.8	8.0

Note: No data available for missing years.

Sources: U.S. Department of Energy/Energy Information Agency, *Coal Distribution* (annual) 1975-1984. U.S. Bureau of Mines *Minerals Yearbook*, 1941, 1947, 1951-54, 1970. U.S. Geological Survey *Mineral Resources* (annual), 1915, 1917, 1918, 1929.

Virginia Coal Rail Destinations: 1915- 1953
(Thousand Tons)

State	1915	1917	1918	1949	1950	1951	1952	1953
AL	68	15	12					
AL/FL/GA/KY/MI	506	361	432	282	358	228	157	177
DC/MD	4		20	398	451	317	313	336
FL	40	51	80					
GA	369	200	278					
IL	120	74	10					
IL/IN	273	227	108	1030	1379	915	1069	837
IN	153	153	98					
KY		11	10					
MI	29	84	52	877	1221	871	733	854
NEW ENG				25	11	5	0	14
NJ				42	62	82	54	50
NY				46	132	63	274	297
NC	817	753	899					
NC-SC	1367	1253	1653	2122	3217	3457	3134	2920
OH	169	78	49	2823	4301	3480	4166	5155
PA				32	62	48	1	24
SC	550	500	754					
TN	373	360	314	1033	1139	736	605	642
VA	2004	3005	2964	5667	4295	8084	7088	5173
WV	0	50	45	32	78	378	385	786
OTHERS	131	3	15	26	77	49	28	44
TOTALS	4827	5337	5600	14403	16720	18665	18004	17284

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1915-1918. Interstate Commerce Commission *Carload Waybill Statistics*, 1949-1953. U.S. Bureau of Mines *Minerals Yearbook*, 1951-1954.

Hampton Roads Coal Shipments: 1988-1903
(Million Tons)

Year	Coastwise	Export	TOTAL	Year	Coastwise	Export	TOTAL
1988	5.9	45.4	51.3	1945	13.4	1.6	15.0
1987	5.3	37.3	42.6	1944	13.5	1.0	14.5
1986	5.0	40.2	45.2	1943	8.6	0.9	9.5
1985	5.5	42.9	48.5	1942	10.6	1.3	11.9
1984	5.1	36.2	41.3	1941	17.5	2.1	19.6
1983	3.3	35.4	38.7	1940	18.3	1.6	19.9
1982	3.0	53.0	56.0	1939	16.8	1.2	18.0
1981	2.6	47.6	50.2	1938	14.4	0.8	15.2
1980	2.0	48.6	50.6	1937	17.9	1.0	18.9
1979	2.1	31.8	33.9	1936	16.7	0.8	17.5
1978	1.7	14.4	16.1	1935	15.6	0.6	16.2
1977	2.6	23.8	26.4	1934	15.5	0.6	16.1
1976	4.2	32.0	36.2	1933	15.1	0.4	15.5
1975	3.7	37.0	40.7	1932	14.4	0.3	14.7
1974	4.5	35.7	40.2	1931	17.5	1.2	18.7
1973	4.5	30.2	34.7	1930	18.3	1.8	20.1
1972	3.4	31.6	35.0	1929	18.7	2.2	20.9
1971	3.4	33.4	36.8	1928	16.6	2.0	18.6
1970	3.8	46.2	50.0	1927	17.7	2.6	20.3
1969	4.4	37.0	41.4	1926	16.3	12.5	28.8
1968	4.9	31.8	36.7	1925	15.7	4.3	20.0
1967	6.0	32.6	38.6	1924	13.3	3.6	16.9
1966	6.4	31.5	37.9	1923	13.6	2.6	16.2
1965	7.0	49.7	56.7	1922	14.6	1.1	15.7
1964	7.6	30.5	38.1	1921	9.5	6.7	16.2
1963	7.6	29.7	37.3	1920	16.5	6.1	22.6
1962	6.1	24.9	31.0	1919	8.9	4.7	13.6
1961	5.9	22.6	28.5	1918	14.5	3.6	18.1
1960	6.3	23.2	29.5	1917	11.7	4.7	16.4
1959	6.8	23.0	29.8	1916	11.8	5.7	17.5
1958	7.4	33.9	41.9	1915	9.9	5.8	15.7
1957	9.3	51.1	60.4	1914	9.7	3.1	12.8
1956	9.8	42.2	52.0	1913	10.2	2.5	12.7
1955	8.1	29.4	37.5	1912	7.2	4.8	12.0
1954	6.5	13.3	19.8	1911	6.5	4.0	10.5
1953	7.9	12.5	20.4	1910	6.1	3.5	9.6
1952	7.2	22.6	29.8	1909	3.1	0.7	3.8
1951	8.9	28.7	37.6	1908	4.8	2.0	6.8
1950	10.0	2.1	12.1	1907	5.1	1.2	6.3
1949	8.8	10.1	18.9	1906	5.7	1.1	6.8
1948	14.8	13.8	28.6	1905	5.6	0.7	6.3
1947	14.4	20.1	34.5	1904	5.1	0.5	5.6
1946	11.6	4.4	16.0	1903	4.2	0.3	4.5

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1903-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1974. *Hampton Roads Maritime Association Annual Reports*, 1974-1988.

Hampton Roads Coal Shipments: 1902-1883
(Million Tons)

Year	Coastwise	Export	TOTAL
1902	3.6	0.5	4.1
1901	4.4	0.5	4.9
1900	3.5	0.9	4.4
1899	3.4	0.5	3.9
1898	3.2	0.2	3.4
1897	3.2	0.05	3.25
1896	2.0	0.05	2.05
1895	3.2	0.03	3.23
1894	3.4	0.04	3.44
1893	3.1	0.04	3.14
1892	1.9	0.03	1.93
1891	1.7	0.03	1.73
1890	1.3	0.04	1.34
1889	1.1	0.01	1.11
1888	1.0	0.01	1.01
1887	0.7	0.04	0.74
1886	0.6	0.01	0.61
1885	0.4	0.03	0.43
1884	na	na	0.27
1883	na	na	0.17

Source: U.S. Geological Survey *Mineral Resources* (annual), 1883-1902.

**N&W Coal Dumpings at Hampton Roads
(Lamberts Point): 1988-1883
(Thousand Tons)**

Year	Export	Bunker	Coast	Local	TOTAL
1988	25364	0	4091	-	29455
1987	20636	0	3727	-	24364
1986	22455	0	3182	-	25636
1985	24636	0	3727	-	28364
1984	21909	0	2636	-	24545
1983	21909	0	2273	-	24182
1982	31455	0	2091	-	33546
1981	29091	0	1545	-	30636
1980	30000	0	1455	-	31455
(No data available for years 1916-1979)					
1915	na	na	na	-	7209
1914	na	na	na	-	6519
1913	na	na	na	-	5410
1912	na	na	na	-	4980
1911	na	na	na	-	3923
1910	na	na	na	-	4041
1909	728	469	1806	-	3229
1908	675	454	1565	-	2401
1907	502	405	1510	-	3221
1906	471	334	2148	-	3021
(No data available for 1904 and 1905)					
1903	329	223	935	112	1599
1902	469	245	1399	173	2286
1901	543	242	1125	182	2098
1900	525	281	1127	181	2113
1899	208	126	1497	132	1963
1898	200	107	1451	131	1890
1897	44	105	1474	115	1738
1896	42	100	1433	97	1671
1895	34	76	1430	160	1640
1894	44	105	1810	97	2057
1893	35	126	1513	100	1774
1892	25	130	1401	98	1654
1891	28	135	1215	91	1468
1890	37	103	941	71	1153
1889	na	na	na	na	1784
1888	na	na	na	na	1563
1887	na	na	na	na	1170
1886	na	na	na	na	924
1885	na	na	na	na	652
1884	na	na	na	na	272
1883	na	na	na	na	106

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1883-1915. Hampton Roads Maritime Association *Annual Reports*, 1982-1988.

Richmond Coalfield
Production, Productivity, Price & Distribution: 1904-1875
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Distribution					Counties
					Man Day	\$/Ton	Shipped	Local	Mine		
1904	na	na	2	na	na	na	na	na	na	Chesterfield	
1903	na	94	(18)27	215	1.35	1.74	26	<1	1	Ches, Hen, Pul	
1902	na	82	(16)24	276	1.06	1.90	22	0	2	Ches, Hen, Pul	
1901	na	100	(12)18	275	0.65	1.60	16	0	2	Ches, Hen, Pul	
1900	na	93	(40)50	255	2.09	1.79	32	<1	17	Ches, Hen, Pul	
1899	2	47	(7)9	110	1.67	1.04	7	1	1	Hen, Pul	
1898	na	na	27	na	na	na	na	na	na	Ches, Hen	
1897	na	na	96	na	na	na	na	na	na	Ches, Hen	
1896	3	801	96	121	0.99	1.27	66	<1	28	Ches, Hen	
1895	2	453	58	90	1.42	1.24	39	<1	17	Ches, Hen	
1894	na	na	52	na	na	na	na	na	na	Ches, Hen	
1893	na	na	34	na	na	na	na	na	na	Ches, Hen	
1892	na	65	34	200	2.59	1.22	22	11	1	Henrico	
1891	na	8	13	100	16.34	1.25	13	0	0	Henrico	
1890	na	24	19	300	2.69	na	19	0	0	Henrico	
1889	na	na	49	257	na	na	45	1	4	Ches, Hen	
1888	na	na	28	na	na	na	26	2	0	Chesterfield	
1887	na	na	30	na	na	na	28	2	0	Chesterfield	
1886	na	na	28	na	na	na	25	3	0	Chesterfield	
1885	na	na	50	na	na	na	na	na	na		
1884	na	na	49	na	na	na	na	na	na		
1883			47								
1882	Mine	Richmond	45	James R.	SHIPPED BY RAILROAD						
1881	Use	Dock	50	Canal	T&J	CM	CH	RP	RF&P	RD	TOTAL
1880	na	na	43.1	na	na	14.8	19.0	14.3	6.7	na	43.1
1879	na	na	45.0	na	na	na	na	13.8	na	na	45.0
1878	na	1.2	50.0	9.9	na	na	na	11.1	na	na	50.1
1877	12.1	2.4	67.9	16.1	na	na	43.2	na	na	14.7	67.9
1876	3.8	11.5	57.1	20.1	na	na	28.3	7.5	na	25.6	57.1
1875	5.8	5.4	88.7	34.9	na	na	43.7	39.1	6.2	25.8	88.7

County Abbreviations: Ches = Chesterfield; Hen = Henrico; Pul = Pulaski.

Railroad Abbreviations: T&J = Tuckahoe & James River; CM = Chesterfield; CH = Cloverhill; RP = Richmond & Petersburg; RF&P = Richmond, Fredericksburg & Potomac; RD = Richmond & Danville.

Note: During 1921, 1922, and 1923 mining was reported at Midlothian (Murphy Co.) in Chesterfield County (50,000 tons). Mining was reported in 1910, 1911, 1912, and 1913 at Gayton (Old Dominion Development Co.) in Henrico County (production volume unknown). There is tonnage duplication between feeder railroads (T&J, CM, CH) and mainline railroads (RP, RF&P, RD). Where Pulaski County is included, production figures in parentheses represent the Richmond Coalfield alone.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1885-1923. Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co. Wilkes, G.P. 1988. *Mining History of the Richmond Coalfield of Virginia*. Virginia Division of Mineral Resources Publication 85.

Richmond Coalfield
Production & Distribution: 1874-1838
(Thousand Tons)

Year	Mine Use	Wagon Haul	James Canal	Appomattox Canal	Shipped by Rail					Richmond Dock	TOTAL
					CM	CH	RP	RF&P	RD		
1874	5.4	na	20.4	na	na	36.5	35.2	7.1	30.3	na	81.9
1873	6.6	na	13.8	na	na	40.0	37.6	3.3	54.5	na	101.5
1872	6.3	na	13.2	na	na	47.3	42.2	1.0	45.2	na	96.0
1871	6.7	na	11.9	na	na	47.0	42.0	2.9	45.0	na	101.9
1870	5.9	na	31.1	na	na	23.6	38.9	7.3	34.4	na	90.2
1869	7.6	na	38.7	na	na	39.7	35.5	9.4	24.9	na	115.6
1868	6.3	na	45.3	na	na	27.2	24.3	2.9	19.6	na	96.2
1867	5.3	na	41.2	na	na	18.4	16.4	6.5	22.9	na	90.8
1866	4.6	na	24.1	na	na	20.5	18.3	na	25.9	na	70.9
1865	4.9	1.5	20.0	na	na	5.3	4.7	na	42.0	na	73.7
1864	7.3	1.5	20.0	na	na	40.8	36.4	na	42.2	na	111.7
1863	7.3	1.5	23.3	na	na	41.6	37.2	na	42.0	na	112.1
1862	7.6	1.5	22.4	na	na	56.7	50.6	na	29.1	na	115.5
1861	6.2	na	21.0	na	na	49.5	45.2	0.5	18.4	18.4	94.7
1860	7.4	na	31.0	na	na	48.0	46.9	3.6	32.3	29.9	112.5
1859	7.0	na	20.8	na	na	50.4	45.9	4.0	30.8	15.1	106.3
1858	7.4	na	23.7	na	na	54.9	49.0	4.0	29.9	18.5	113.7
1857	7.5	na	36.6	na	na	50.2	50.4	na	24.3	na	114.8
1856	6.9	na	24.4	na	na	47.2	36.9	na	38.8	na	106.2
1855	8.2	na	26.5	na	na	61.0	45.4	na	35.6	na	126.0
1854	8.7	na	26.6	na	na	59.9	53.5	na	43.5	na	132.6
1853	6.2	na	26.5	na	na	65.0	52.1	na	15.6	na	101.7
1852	7.0	na	26.3	0.2	na	59.8	na	na	35.0	Export	106.1
1851	8.9	39.6	30.4	na	31.0	56.0	na	na	17.4	3.2	136.5
1850	8.2	57.1	39.2	0.1	46.1	43.1	na	na	0	2.1	138.0
1849	8.8	57.1	40.0	<0.1	53.2	56.5	na	na	0	0.8	138.8
1848	7.9	57.1	32.5	<0.1	62.1	58.8	na	na	0	3.4	120.7
1847	8.9	57.1	35.3	<0.1	65.3	51.3	na	18.0	0	3.4	136.4
1846	8.2	57.1	23.8	na	77.0	18.0	na	18.0	0	3.4	124.7
1845	8.8	57.1	36.7	na	na	14.3	na	18.0	0	6.8	134.6
1844	7.5	57.1	18.5	na	39.8	14.3	na	18.0	0	6.8	115.3
1843	6.3	57.1	na	na	25.3	14.3	na	18.0	0	6.8	95.6
1842	na	72.2	28.2	9.0	30.6	na	na	18.0	0	6.8	73.6
1841	na	na	na	na	36.4	na	na	18.0	0	6.8	79.6
1840	na	na	na	na	na	0	na	18.0	0	6.8	90.4
1839	na	na	na	na	38.3	0	na	18.0	0	na	96.0
1838	na	na	na	na	38.6	0	na	12.0	0	na	108.0

Railroad Abbreviations: CM = Chesterfield; CH = Cloverhill; RP = Richmond & Petersburg; RF&P = Richmond, Fredericksburg & Potomac; RD = Richmond & Danville.

Note: Tonnage duplication between feeder RRs (CM and CH) and main line RRs (RP, RF&P, RD).

Sources: Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co. Wilkes, G.P. 1988. *Mining History of the Richmond Coalfield of Virginia*. Virginia Division of Mineral Resources Publication 85.

Richmond Coalfield
Production & Distribution: 1837-1796
(Thousand Tons)

Year	Wagon Haul	Canal	Shipped by Rail			Destination			Export	TOTAL
			CM	RP	RF&P	Phil	Wash	NYC		
1837	na	30.7	na	na	6.0	na	na	na	na	112.0
1836	na	32.8	85.0	8.0	0	na	na	na	na	124.0
1835	na	27.5	na	0	0	na	na	na	140.0	175.0
1834	na	21.7	na	0	0	na	na	na	na	124.0
1833	na	27.9	na	0	0	na	na	12.8	142.0	159.7
1832	na	26.7	na	0	0	na	na	15.5	na	132.0
1831	na	24.5	na	0	0	na	na	na	na	104.3
1830	na	27.7	0	0	0	na	na	na	na	102.8
1829	na	27.4	0	0	0	4.1	na	na	na	93.4
1828	na	23.8	0	0	0	4.1	na	na	na	100.1
1827	40.0	31.2	0	0	0	4.1	na	na	na	84.7
1826	na	14.3	0	0	0	4.1	na	na	na	88.6
1825	36.0	15.2	0	0	0	4.1	na	na	na	66.7
1824	50.0	na	0	0	0	4.1	na	na	na	67.0
1823	na	na	0	0	0	na	na	na	na	44.0
1822	na	na	0	0	0	0.4	na	na	48.0	54.0
1821	na	10.0	0	0	0	0.5	na	na	na	64.0
1820	4.2	na	0	0	0	0.5	na	na	na	62.0
1819	na	na	0	0	0	2.9	na	na	na	60.0
1818	na	na	0	0	0	3.9	na	na	na	59.0
1817	na	na	0	0	0	2.4	na	na	na	58.0
1816	na	na	0	0	0	6.0	na	na	na	57.0
1815	10.0	na	0	0	0	7.4	na	na	na	56.0
1814	na	na	0	0	0	na	na	na	na	54.0
1813	na	na	0	0	0	0.2	na	na	na	52.0
1812	40.0	na	0	0	0	9.4	na	na	na	50.0
1811	na	na	0	0	0	na	na	na	na	48.0
1810	na	0.8	0	0	0	na	na	na	na	47.0
1809	3.1	4.7	0	0	0	na	na	na	na	46.0
1808	0.1	11.5	0	0	0	na	na	na	na	45.0
1807	22.1	14.0	0	0	0	na	na	na	na	44.0
1806	3.7	12.5	0	0	0	na	na	na	na	43.0
1805	9.2	14.8	0	0	0	na	na	na	na	42.0
1804	26.8	13.7	0	0	0	na	na	na	na	40.5
1803	15.3	14.2	0	0	0	na	na	na	<0.1	29.5
1802	2.5	na	0	0	0	na	na	0.1	na	26.0
1801	na	na	0	0	0	0.3	0.8	na	na	22.0
1800	na	na	0	0	0	na	na	na	na	18.0
1799	na	na	0	0	0	na	na	na	na	14.0
1798	na	10.0	0	0	0	na	na	na	na	22.0
1797	na	0.7	0	0	0	na	na	na	na	7.0
1796	na	na	0	0	0	na	na	na	na	4.0

Railroad Abbreviations: CM = Chesterfield; RP = Richmond & Petersburg; RF&P = Richmond, Fredericksburg & Potomac.

Sources: Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co. Wilkes, G.P. 1988. *Mining History of the Richmond Coalfield of Virginia*. Virginia Division of Mineral Resources Publication 85.

Richmond Coalfield
Production & Distribution: 1795-1748
(Thousand Tons)

Year	Wagon Haul	Export	Tonnage	Year	Wagon Haul	Export	Tonnage
1795	na	na	2.0	1772	na	na	0.4
1794	na	na	1.0	1771	na	0.2	0.5
1793	na	0.6	0.7	1770	na	0.3	0.5
1792	na	0.2	0.4	1769	na	0.8	1.0
1791	na	0.1	0.4	1768	na	0.1	0.5
1790	na	na	0.4	1767	na	<0.1	0.5
1789	na	na	0.4	1766	na	0.2	0.6
1788	na	na	0.4	1765	na	0.7	0.9
1787	na	na	0.4	1764	na	0.6	0.8
1786	na	na	0.4	1763	na	1.1	1.4
1785	na	na	0.4	1762	na	0.5	0.7
1784	na	na	0.4	1761	na	0.2	0.3
1783	na	na	0.4	1760	na	0.2	0.3
1782	<0.1	na	0.5	1759	na	na	0.2
1781	na	na	0.5	1758	na	<0.1	0.2
1780	<0.1	na	0.5	1757	na	na	0.1
1779	0.1	na	0.5	1756	na	na	0.1
1778	na	na	0.5	1754	na	na	0.1
1777	0.1	na	0.5	1753	na	na	0.1
1776	0.1	0.4	0.4	1752	na	na	0.1
1775	na	na	0.4	1751	na	na	0.05
1774	na	na	0.4	1750	na	na	0.05
1773	na	na	0.4	1749	na	na	0.05
				1748	na	na	0.05

Sources: Eavenson, H.N. 1942. *The First Century and a Quarter of the American Coal Industry*. Pittsburgh: Koppers Co. Wilkes, G.P. 1988. *Mining History of the Richmond Coalfield of Virginia*. Virginia Division of Mineral Resources Publication 85.

Valley Coalfields — Montgomery County
Production, Productivity, Wages: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Production				Days	Tons Man Day	Average Wages		Office Workers	
			Strip	Tipple	Truck	TOTAL			\$/Year	\$/Day	#	\$/Year
1988	2	5	6	0	0	6	118	9.41	3156	27	2	9200
1986	1	0	0	0	0	0	0	0	0	0	0	0
1985	1	2	1	0	0	1	na	na	1400	na	0	0
1971	1	1	0	0	<1	<1	3	12.00	90	30	0	0
1970	4	7	0	0	2	2	95	2.33	959	10	0	0
1969	3	2	0	0	3	3	na	na	4050	na	0	0
1968	2	2	0	0	2	2	na	na	1914	na	0	0
1967	2	2	0	0	4	4	na	na	3450	na	0	0
1966	2	8	0	0	5	5	105	6.13	2263	22	0	0
1965	5	11	0	0	6	6	103	4.99	1643	16	0	0
1964	10	15	0	0	11	11	98	7.47	1818	19	0	0
1963	7	18	0	0	14	14	228	3.51	2004	9	0	0
1962	7	19	0	0	13	13	120	5.48	1948	16	0	0
1961	10	21	0	0	15	15	131	5.61	1719	13	0	0
1960	8	20	0	0	12	12	178	3.25	1460	8	0	0
1959	11	27	0	0	16	16	na	na	1127	na	2	2911
1958	9	33	0	0	16	16	202	2.35	1541	8	2	3020
1957	8	41	0	0	27	27	190	3.49	2066	11	1	2060
1956	na	41	0	0	10	10	99	4.34	1363	14	1	2340
1955	na	23	0	0	15	15	180	3.67	na	na	na	na
1954	na	51	0	0	15	15	142	2.05	na	na	na	na
1953	na	112	0	72	11	83	175	3.67	na	na	na	na
1952	na	136	0	92	11	104	204	3.73	na	na	na	na
1951	na	na	0	112	44	156	na	na	na	na	na	na
1950	na	134	0	na	na	113	206	4.10	na	na	na	na
1949	na	219	0	na	na	121	140	3.95	na	na	na	na
1948	na	234	0	na	na	176	235	3.19	na	na	na	na
1947	na	218	0	152	31	183	211	3.46	na	na	na	na
1946	na	209	0	176	5	181	217	3.98	na	na	na	na

Note: For missing years Montgomery County reported no coal production.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Valley Coalfields — Montgomery County
Production, Productivity, Price & Distribution: 1970-1928
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Wage(\$)	Price(\$)	Distribution			
					Man Day	Ton	Ton	Rail	Truck	Local	Mine
1970	4	5	2	95	3.26	4.33	6.59	0	0	2	0
1969	3	2	3	na	na	3.24	5.00	0	0	3	na
1968	2	2	2	na	na	1.87	4.82	0	0	2	na
1967	2	2	4	na	na	1.66	na	0	0	4	na
1966	2	3	2	105	6.32	3.51	5.04	0	2	na	na
1965	5	32	10+	103	2.98	3.20	4.91	0	na	6	na
1964	10	20	8	98	4.00	2.48	3.65	0	8	na	na
1963	7	15	14	228	3.95	2.51	3.31	0	<1	14	na
1962	7	19	11	120	4.83	2.96	3.91	0	1	12	na
1961	10	18	12	131	4.99	2.34	3.40	0	2	14	na
1960	8	11	8	178	4.34	2.52	3.90	0	2	10	na
1959	na	na	17	na	na	1.87	na	NW	VGN	16	<1
1958	9	22	12	202	2.77	3.24	6.06	5	0	5	6
1957	8	71	25	190	1.84	3.12	7.67	3	0	19	5
1956	na	17	7	99	4.34	5.78	6.08	2	0	<1	7
1955	na	23	15	180	3.67	na	6.49	4	0	12	na
1954	na	51	26+	142	3.36	na	4.48	11	15	na	na
1953	na	112	72	175	3.67	na	6.33	na	66	6	na
1952	na	136	103	204	3.73	na	5.25	na	85	19	na
1951	na	na	156	na	na	na	na	50	106	na	na
1950	na	134	113	206	4.10	na	4.65	na	106	7	na
1949	na	219	120	140	3.95	na	4.42	na	111	9	1
1948	na	234	176	235	3.19	na	4.75	na	159	15	2
1947	na	218	159	211	3.46	na	4.61	na	146	10	3
1946	na	209	180	217	3.97	na	3.99	na	167	11	2
1945	na	198	186	263	3.57	na	3.55	na	166	16	2
1944	na	258	221+	265	3.24	na	2.93	na	173	43	5
1943	na	303	232+	252	3.03	na	3.05	na	189	38	4
1942	na	320	230+	224	3.21	na	2.59	na	184	41	4
1941	na	na	180	na	na	na	na	na	180	na	na
1940	na	265	173	183	3.57	na	2.08	na	163	8	na
1939	na	na	143	na	na	na	na	na	143	na	na
1938	na	527	140*	135	1.97	na	na	na	110	23	1
1937	na	577	204*	183	1.93	na	na	na	164	32	na
1936	na	517	198*	187	1.94	na	na	44	122	25	<1
1935	4	624	187*	163	1.84	na	2.31	73	106	1	6
1934	na	722	202*	148	1.89	na	2.96	118	72	1	7
1933	na	678	165*	150	1.63	na	2.95	90	73	na	2
1932	na	466	157	160	2.11	na	3.40	41	111	na	4
1931	na	426	129	153	1.97	na	3.07	49	74	na	5
1930	na	395	167	167	2.54	na	2.70	50	108	na	8
1929	na	335	152	167	2.71	na	2.70	42	104	na	5
1928	na	364	104	120	2.36	na	2.88	37	61	na	4

Railroad Abbreviations: NW = Norfolk & Western; VGN = Virginian.

Note: (+) includes Scott County production. (*) includes Pulaski County production.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1928-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1970.

Valley Coalfields — Montgomery County
Production, Productivity, Price & Distribution: 1927-1840
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	NW	VGN+	Local	Mine
1927	na	306	96	115	2.74	2.76	58	35	4	1
1925	na	216	81	226	1.65	3.54	54	25	1	<1
1924	na	171	41	166	1.43	3.24	33	7	1	1
1923	11	165	71	138	3.13	4.95	50	7	3	11
1922	na	162	42	172	1.51	4.34	23	10	5	4
1921	na	105	37	189	1.85	4.22	9	16	6	6
1920	na	136	44	193	1.69	3.80	26	7	6	5
1919	na	139	44	262	1.21	3.94	27	1	11	5
1918	7	150	48	256	1.26	3.95	38	na	6	4
1916	na	270	112*	237	1.76	1.70	49	na	39	25
1915	na	251	53*	189	1.13	2.13	40	na	9	5
1914	na	123	45*	345	1.50	1.93	36	<1	6	3
1908	17	na	na	na	na	na	na	na	na	na
1907	11	na	na	na	na	na	na	na	na	na
1904	na	232	22*	229	0.41	2.11	15	0	5	2
1903	na	103	20	137	1.44	2.37	12	0	8	1
1902	na	53	13	233	1.04	2.40	8	0	5	na
1901	na	53	11	178	1.18	2.03	6	0	5	<1
1900	na	55	10	186	0.96	2.10	6	0	4	<1
1899	na	70	21	152	1.93	1.99	7	0	13	1
1896	na	40	8	147	1.33	2.03	1	0	7	<1
1895	na	14	1	87	1.07	1.84	<1	0	1	na
1892	4	42	4	110	0.76	2.43	3	0	1	<1
1891	na	28	4	94	1.60	2.36	1	0	3	<1
1890	na	36	6	205	0.76	1.95	2	0	3	<1
1889	na	56	8	na	na	2.41	3	0	5	<1
1888	na	na	9	na	na	na	4	0	4	na
1887	na	na	14	na	na	na	11	0	3	na
1886	na	na	17	na	na	na	11	0	6	na
1885	na	na	5	na	na	na	na	0	5	na
1880	12	47	3	na	na	na	na	0	3	na
1870	na	na	<1	na	na	na	na	0	<1	na
1860	na	na	3	na	na	na	na	0	3	na
1840	na	2	<1	na	na	na	0	0	<1	na

Note: (*) includes Pulaski County production. For missing Montgomery County production years data was combined with figures for several other counties, and therefore not discernible. (+) Railroads: NW = Norfolk & Western; VGN = Virginian.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1885-1927. U.S. *Census Reports* 1880, 1870, 1860, 1840.

Valley Coalfields — Pulaski County
Production, Productivity, Price & Distribution: 1982-1880
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	<u>Tons</u> Man Day	<u>Price(\$)</u> Ton	Shipped	Local	Mine	Production from Additional Counties
1982	1	2	9	13	—	na	na	na	na	
1955	1	na	<1	na	na	na	na	na	na	
1954	1	na	<1	na	na	na	na	na	na	
1940	na	208	173	183	3.57	na	172	2	na	Montgomery
1939	na	na	153	na	na	na	na	na	na	Montgomery
1938	na	527	138	135	1.97	na	133	1	5	Montgomery
1937	na	577	204	183	1.93	na	196	na	8	Montgomery
1936	na	517	198	187	1.94	na	191	<1	7	Montgomery
1935	4	624	187	163	1.84	2.31	181	6	na	Montgomery
1934	na	722	202	148	1.89	2.96	191	7	4	Montgomery
1933	na	678	165	150	1.63	2.95	152	4	1	Montgomery
1932	na	216	41	130	1.45	2.10	39	<1	1	Buchanan
1931	na	140	55	219	1.79	3.00	53	<1	1	Scott
1930	na	142	73	209	2.45	2.10	69	1	3	Scott
1929	na	227	119	213	2.47	2.30	113	2	4	Scott
1928	na	192	69	140	2.56	2.62	63	3	3	Scott
1927	na	165	76	151	3.07	2.68	66	7	3	Scott
1925	na	226	186	262	3.14	3.84	178	2	6	Wythe
1924	na	233	150	221	2.93	3.74	142	2	7	Scott
1921	na	154	52	258	1.32	na	24	14	14	Chesterfield
1920	na	332	130	272	1.44	na	83	31	15	Scott
1919	na	103	66	191	3.33	na	57	7	8	Scott
1918	na	140	105	229	3.28	na	46	45	14	Scott
1916	na	270	112	237	1.76	1.70	48	39	25	Montgomery
1915	na	189	54	230	1.23	2.13	40	9	5	Montgomery
1914	na	245	46	123	1.53	1.93	36	6	4	Montgomery
1903	na	94	27	215	1.20	1.74	26	<1	1	Chesterfield
1902	na	82	24	276	1.06	1.90	22	0	2	Chesterfield
1899	na	47	9	110	1.67	1.04	7	1	1	Henrico
1896	3	45	8	115	1.60	1.13	8	<1	0	
1895	2	32	10	146	2.2	1.38	4	6	0	
1892	na	29	24	237	3.34	1.09	16	8	0	
1891	na	38	22	256	2.28	1.10	13	9	0	
1888	na	na	34	na	na	1.57	0	34	0	
1880	1	na	na	na	na	na	na	na	na	

Note: Hand undercut and shot in truck mines. For missing years Pulaski County was either not reported or its production was combined with other counties.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1888-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1970. *Virginia Division of Mines Annual Reports*, 1954-55. *U.S. Census Report* 1880.

Southwest Virginia Coalfield — Buchanan County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	41	1304	9250	9174	19769	0	2376	11011	6383
1987	140	1082	7944	9667	18833	0	3624	9927	5282
1986	95	880	6284	9065	16325	0	3639	9010	3676
1985	160	761	5513	8944	15377	0	4426	7234	3218
1984	97	823	3792	10797	15509	7	6454	5459	2025
1983	51	943	2744	8392	12130	0	5376	5294	1459
1982	82	1143	3906	10310	15242	13	6949	7165	1125
1981	78	1296	4766	12642	18782	0	9664	7484	1634
1980	99	1892	4923	10808	17722	54	9512	6453	1703
1979	147	1545	4546	9967	16205	40	8419	6329	1418
1978	418	1891	2658	8495	13462	101	7786	4764	811
1977	585	3435	3818	8913	16751	49	10302	5197	1203
1976	458	3762	4247	7377	15804	21	10283	4328	1171
1975	736	4253	4033	6142	14064	32	9352	3920	759
1974	1017	3008	4602	5665	14293	22	9490	3310	1471
1973	948	1830	5197	5535	13511	30	8130	3780	1571
1972	861	1358	5708	5297	13224	53	7584	5587	0
1971	963	1373	4591	5374	12300	26	7897	4377	0
1970	974	1171	5984	6686	14815	524	8555	5717	0
1969	578	502	5471	8208	14759	1103	8495	5160	0
1968	567	528	5096	9625	15817	2171	9408	4237	0
1967	838	1089	3343	10053	15323	3966	8761	2596	0
1966	1079	852	3091	11283	16306	6478	9828	0	0
1965	796	433	2261	11812	15302	8491	6811	0	0
1964	511	611	1851	11580	14552	9710	4841	0	0
1963	489	302	1508	10885	13185	9833	3352	0	0
1962	234	135	1293	10378	12040	9783	2257	0	0
1961	139	0	1323	9541	11003	8972	2031	0	0
1960	107	4	1797	8721	10629	8378	2252	0	0
1959	34	13	2231	8328	10605	7882	2723	0	0
1958	83	35	2317	7465	9905	6924	2980	0	0
1957	140	64	2932	7534	10671	7344	3326	0	0
1956	187	53	3234	6142	9617	5711	3906	0	0
1955	157	22	3758	5199	9135	na	na	0	0
1954	72	12	2345	3480	5910	na	na	0	0
1953	121	98	2546	2989	5754	na	na	0	0
1952	0	302	3777	2450	6530	na	na	0	0
1951	0	274	4188	2124	6586	na	na	0	0
1950	0	498	2883	1944	5324	na	na	0	0
1949	0	674	3035	1569	5278	na	na	0	0
1948	0	926	3988	708	5622	na	na	0	0
1947	0	710	4755	184	5649	na	na	0	0
1946	0	288	4047	45	4380	na	na	0	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Buchanan County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	239	4779	201	23297	116	20.58	5.63	144	19543
1987	241	4898	231	38079	165	16.65	9.91	164	10903
1986	265	5281	173	22118	128	17.87	7.16	172	17544
1985	269	5279	na	22547	na	na	7.74	269	12078
1984	310	5468	na	26642	na	na	8.34	201	17111
1983	267	4144	137	23491	171	21.37	8.00	152	14784
1982	342	6181	135	22933	170	18.27	9.30	193	13633
1981	364	6712	152	23025	151	18.40	8.21	215	11814
1980	388	6700	152	22199	146	17.40	8.39	246	9673
1979	370	7072	151	19526	129	15.17	8.50	247	9223
1978	439	6385	123	18971	154	17.14	8.98	337	11618
1977	523	7529	130	15845	122	17.11	7.13	334	6937
1976	460	7129	137	15006	110	16.18	8.47	313	7142
1975	447	6653	127	14193	112	16.64	6.73	260	6023
1974	396	5939	121	12022	99	19.89	4.98	251	4230
1973	373	5152	113	11185	99	23.21	3.07	184	3187
1972	349	5215	218	9437	43	11.61	2.39	232	3706
1971	397	4825	118	8755	74	12.19	3.43	205	3546
1970	526	4969	210	8255	39	13.55	2.77	290	11068
1969	545	5138	207	6376	31	14.28	2.22	255	3684
1968	584	4890	208	5874	28	15.06	1.82	245	3064
1967	688	4884	185	5060	27	13.31	1.65	106	6368
1966	855	5241	202	4636	23	12.62	1.49	142	7337
1965	957	5892	202	4149	21	11.01	1.63	336	3258
1964	975	6385	242	3864	16	11.64	1.70	266	2594
1963	978	6233	202	3608	18	9.60	1.71	250	2089
1962	937	6256	201	3250	16	8.91	1.69	301	1570
1961	981	6458	195	2890	15	8.36	1.70	320	1646
1960	289	6576	200	2895	14	7.83	1.79	289	1921
1959	951	6748	192	2956	15	7.52	1.88	312	1838
1958	900	6515	202	3065	15	7.11	2.01	358	1991
1957	787	6830	212	3334	16	7.69	2.13	382	1883
1956	na	5730	197	3444	17	7.89	2.05	341	1946
1955	550	6215	201	na	na	7.15	na	na	na
1954	na	4299	181	na	na	7.06	na	na	na
1953	na	4269	192	na	na	6.89	na	na	na
1952	na	4943	196	na	na	6.58	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	4047	177	na	na	6.58	na	na	na
1949	na	4605	159	na	na	6.04	na	na	na
1948	na	4013	219	na	na	5.59	na	na	na
1947	na	3632	250	na	na	5.95	na	na	na
1946	na	3485	236	na	na	5.43	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Buchanan County
Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	14	38	42	8629	205	41	25.47	8.07	3	360
1987	15	93	92	8396	91	134	16.33	5.59	1	-
1986	9	33	128	11585	80	95	17.87	4.02	0	0
1985	13	39	na	8552	na	160	na	2.09	4	4107
1984	11	30	na	11640	na	97	na	3.61	5	7044
1983	16	19	83	14342	173	51	32.30	5.30	1	4720
1982	9	35	88	18827	214	82	26.60	8.04	0	0
1981	15	24	57	13186	231	78	57.20	4.04	0	0
1980	19	31	50	11750	235	99	63.65	3.69	10	3137
1979	14	32	120	13314	111	147	38.27	2.90	13	5494
1978	36	110	82	17553	214	418	46.34	4.62	17	24958
1977	44	75	86	14419	168	585	90.63	1.85	9	1656
1976	51	133	100	8999	90	458	34.41	2.62	21	4297
1975	55	138	86	12113	141	736	62.00	2.27	18	7243
1974	52	125	88	12827	146	1018	92.51	1.58	25	3253
1973	61	123	70	8990	128	948	110.15	1.17	21	2076
1972	61	128	na	6407	na	861	na	0.95	31	1558
1971	49	106	94	8433	68	963	96.60	0.92	20	2331
1970	53	122	na	7157	na	974	na	0.90	18	1439
1969	39	75	na	5204	na	578	na	0.67	17	10407
1968	32	55	na	5891	na	567	na	0.57	7	9067
1967	27	60	na	4987	na	838	na	0.36	5	3625
1966	35	89	na	4764	na	1079	na	0.39	5	11103
1965	31	67	na	5800	na	796	na	0.49	11	8860
1964	24	74	na	5672	na	511	na	0.82	7	1184
1963	21	58	na	5092	na	490	na	0.60	6	8789
1962	13	39	na	4827	na	234	na	0.80	2	2835
1961	14	29	na	4491	na	139	na	0.93	1	90
1960	2	19	na	4110	na	107	na	0.73	2	280
1959	6	15	na	3625	na	34	na	1.60	0	0
1958	11	30	na	2318	na	88	na	0.79	1	125
1957	10	27	na	2923	na	140	na	0.57	2	163
1956	na	23	na	4034	na	187	na	0.50	2	2500
1955	na	na	na	na	na	157	na	na	na	na
1954	na	na	na	na	na	72	na	na	na	na
1953	na	na	na	na	na	121	na	na	na	na

Note: No auger mines reported prior to 1953

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Southwest Virginia Coalfield — Buchanan County
Strip Mine Performance: 1988-1944
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons	Wage(\$)	Office Workers	
				\$/Year	\$/Day		Man Day	Ton	#	\$/Year
1988	24	434	213	14028	66	1304	14.11	4.67	5	8097
1987	27	367	99	15253	134	1082	29.79	4.50	7	14654
1986	27	269	198	18777	95	880	16.53	5.75	7	43606
1985	26	304	na	16445	na	761	na	6.57	26	23228
1984	27	280	na	16016	na	823	na	5.45	28	17617
1983	21	275	134	21320	159	943	25.60	6.21	20	24507
1982	34	353	125	24438	196	1143	25.90	7.57	24	6293
1981	34	354	117	27147	232	1296	31.29	7.41	29	9826
1980	68	435	132	20667	157	1892	32.95	4.76	31	12645
1979	44	411	137	18521	135	1545	27.44	4.92	36	11054
1978	69	484	121	17296	143	1891	32.28	4.43	47	20225
1977	116	763	138	16753	121	3435	32.63	3.71	51	8323
1976	100	570	141	16835	119	3762	46.80	2.54	54	6535
1975	109	521	117	15801	135	4153	68.14	2.04	44	5682
1974	102	465	108	13902	129	3008	59.89	2.15	57	4215
1973	67	228	98	9233	94	1830	81.91	1.09	21	1890
1972	66	247	na	6802	na	1358	na	1.24	35	2762
1971	65	187	92	9002	74	1373	79.80	1.23	28	1607
1970	60	160	na	7912	na	1171	na	1.08	24	877
1969	24	87	na	5360	na	502	na	0.93	14	9025
1968	27	90	na	5476	na	528	na	0.93	7	14592
1967	22	79	na	4641	na	1089	na	0.34	3	16773
1966	17	93	na	5583	na	852	na	0.61	3	20054
1965	12	55	na	5406	na	433	na	0.69	6	8753
1964	9	70	na	7560	na	611	na	0.87	5	4248
1963	9	45	na	4627	na	302	na	0.69	1	160
1962	6	15	na	4453	na	135	na	0.50	3	1800
1961	0	0	0	0	0	0	0	0	0	0
1960	2	7	na	2550	na	4	na	4.60	3	3853
1959	3	2	na	2423	na	13	na	0.37	1	1320
1958	3	22	na	1290	na	35	na	0.83	0	0
1957	4	21	na	4080	na	64	na	1.34	2	1350
1956	na	38	na	3518	na	53	na	2.50	4	1294
1955	na	na	na	na	na	22	na	na	na	na
1954	na	na	na	na	na	12	na	na	na	na
1953	na	41	na	na	na	98	na	na	na	na
1952	8	104	na	na	na	302	na	na	na	na
1951	13	na	na	na	na	274	na	na	na	na
1950	8	191	na	na	na	498	na	na	na	na
1949	7	219	na	na	na	674	na	na	na	na
1948	na	243	na	na	na	926	na	na	na	na
1947	4	75	na	na	na	710	na	na	na	na
1946	2	67	na	na	na	288	na	na	na	na
1945	1	37	228	na	na	154	18.26	na	na	na
1944	1	40	137	na	na	129	23.54	na	na	na

Note: No strip mines reported prior to 1944.

Source: *Virginia Division of Mines Annual Reports, 1946-1988.*

Southwest Virginia Coalfield — Buchanan County
Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	15	1662	240	29330	122	9250	0	2867	6383	23.19	5.27
1987	16	1550	242	34361	142	7944	0	2661	5282	21.18	6.70
1986	18	1723	202	32649	162	6284	53	2556	3676	18.06	8.97
1985	19	1866	na	30821	na	5513	183	2113	3218	na	10.42
1984	27	1765	na	35526	na	3792	204	1562	2026	na	16.54
1983	20	1413	169	23743	140	2744	96	1188	1459	11.49	12.18
1982	20	2632	159	24129	152	3706	196	2385	1125	8.86	17.16
1981	19	2816	191	23508	123	4766	287	2846	1623	8.86	13.88
1980	20	2998	212	26125	123	4923	397	2822	1703	7.75	15.87
1979	20	3336	194	20920	108	4546	493	2635	1418	7.02	15.38
1978	22	2700	134	22239	166	2658	244	1602	811	7.35	22.59
1977	22	3490	181	17756	98	3818	364	2250	1203	6.04	16.23
1976	19	3631	213	15944	75	4247	479	2597	1171	5.49	13.66
1975	18	3524	226	14647	65	4033	872	2404	756	5.06	12.80
1974	19	3276	186	12413	67	4602	1109	2120	1372	7.55	8.84
1973	18	2818	206	13215	64	5197	1391	2367	1439	8.95	7.17
1972	17	2868	na	11011	na	5708	1443	4266	0	na	5.53
1971	20	2401	162	10564	68	4591	1300	3291	0	na	5.52
1970	16	2272	na	10759	na	5984	1796	4188	0	na	4.08
1969	13	1809	na	9434	na	5471	1735	3736	0	na	3.12
1968	10	1494	na	8602	na	5096	2159	2937	0	na	2.52
1967	9	1142	na	7692	na	3343	1817	1526	0	na	2.63
1966	10	950	na	7741	na	3091	3091	0	Hand	na	2.38
1965	12	779	na	7183	na	2261	2231	0	30	na	2.47
1964	10	719	na	6138	na	1851	1808	0	43	na	2.38
1963	11	625	na	5810	na	1508	1454	0	54	na	2.41
1962	11	545	na	5857	na	1293	1222	0	71	na	2.47
1961	9	604	na	4982	na	1323	1265	0	59	na	2.27
1960	64	829	na	29571	na	1797	1656	0	141	na	2.42
1959	19	1143	na	5513	na	2231	2082	0	149	na	2.82
1958	15	1290	na	5422	na	2317	2237	0	80	na	3.02
1957	19	1461	na	5578	na	2932	2470	0	462	na	2.78
1956	na	1627	na	4965	na	3234	2963	0	271	na	2.50
1955	na	na	na	na	na	3758	na	0	na	na	na
1954	na	na	na	na	na	2345	na	0	na	na	na
1953	na	na	na	na	na	2546	na	0	na	na	na
1952	na	na	na	na	na	3777	na	0	na	na	na
1951	na	na	na	na	na	4188	na	0	na	na	na
1950	na	na	na	na	na	2883	na	0	na	na	na
1949	na	na	na	na	na	3035	na	0	na	na	na
1948	na	na	na	na	na	3988	na	0	na	na	na
1947	na	na	na	na	na	4755	na	0	na	na	na
1946	na	na	na	na	na	4047	na	0	na	na	na

Note: (*) MA = Machine; CM = Continuous miner; LW = Longwall. Longwall tonnage reported only for years shown. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Buchanan County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	Hand	MA+	CM+	Man Day	Ton
1988	166	2645	178	21238	119	9174	0	1031	8143	19.49	6.12
1987	183	2888	178	44035	247	9667	0	2402	7265	18.81	13.13
1986	211	3256	155	16928	109	9065	0	2611	6454	17.96	6.07
1985	211	3070	na	18300	na	8944	0	3822	5122	na	6.28
1984	245	3393	na	18196	na	10747	7	5331	5459	na	5.72
1983	216	2437	137	20233	148	8392	0	4286	4106	17.79	8.32
1982	279	3161	136	22815	160	10310	13	5528	4770	23.98	6.67
1981	296	3518	158	22290	141	12643	—	8003	4639	22.74	6.20
1980	281	3236	152	18868	124	10808	54	7124	3631	21.97	6.23
1979	292	3293	152	18299	120	9967	40	6234	3693	19.91	6.03
1978	312	3091	127	16430	129	8495	101	5233	3161	21.64	5.96
1977	341	3201	131	13579	104	8913	49	5918	2946	21.25	4.89
1976	290	2858	137	13729	100	7377	21	5585	1731	18.84	5.28
1975	265	2470	133	13323	100	6142	32	4590	1516*	18.70	5.36
1974	223	2073	133	10929	82	5665	22	4355	1190*	20.55	4.00
1973	197	1983	141	8662	61	5535	30	3960	1412*	19.79	3.10
1972	205	1973	na	7671	na	5297	53	3922	1321	na	2.86
1971	263	2131	126	6713	61	5374	26	4261	1087	20.01	2.66
1970	397	2415	na	5977	na	6686	542	4614	1529	na	2.16
1969	469	3167	na	4685	na	8208	1103	5680	1424	na	2.71
1968	515	3251	na	4632	na	9625	2171	6154	1300	na	1.56
1967	630	3603	na	4390	na	10053	3966	5017	1070	na	1.57
1966	793	4109	na	3894	na	11283	6478	4806	0	na	1.42
1965	902	4991	na	3723	na	11812	8461	3351	0	na	1.57
1964	932	5524	na	3495	na	11580	9667	1912	0	na	1.67
1963	937	5505	na	3334	na	10885	9779	1106	0	na	1.69
1962	907	5657	na	2985	na	10378	9712	666	0	na	1.63
1961	958	5825	na	2665	na	9541	8913	628	0	na	1.63
1960	221	5730	na	2547	na	8721	8236	485	0	na	1.67
1959	923	5588	na	2432	na	8328	7733	594	0	na	1.64
1958	871	5173	na	2490	na	7465	6845	621	0	na	1.73
1957	754	7321	na	2717	na	7534	6882	652	0	na	1.92
1956	na	4042	na	2828	na	6142	5440	703	0	na	1.86
1955	na	na	na	na	na	5199	na	na	na	na	na
1954	na	na	na	na	na	3480	na	na	na	na	na
1953	na	na	na	na	na	2989	na	na	na	na	na
1952	na	na	na	na	na	2450	na	na	na	na	na
1951	na	na	na	na	na	2124	na	na	na	na	na
1950	na	na	na	na	na	1944	na	na	na	na	na
1949	na	na	na	na	na	1569	na	na	na	na	na
1948	na	na	na	na	na	708	na	na	na	na	na
1947	na	na	na	na	na	184	na	na	na	na	na
1946	na	na	na	na	na	45	na	na	na	na	na

Note: (+) MA = Machine; CM = Continuous miner. (*) Longwall production 1975 = 2,771 tons; 1974 = 98,640 tons; 1973 = 132,483 tons. No longwall reports for other years. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

**Southwest Virginia Coalfield — Buchanan County
Office Workers at Underground Mines: 1988-1956**

Year	Tipple Mines		Truck Mines	
	#	\$/Year	#	\$/Year
1988	21	28030	115	18991
1987	22	23011	134	8800
1986	31	16557	134	16410
1985	19	24977	211	7604
1984	35	29008	133	14260
1983	27	25139	104	10323
1982	38	23500	131	12089
1981	48	19332	138	9617
1980	65	13284	140	7827
1979	60	14250	138	6910
1978	88	17548	185	5384
1977	83	10389	191	5316
1976	82	14655	156	3785
1975	49	14788	149	3095
1974	40	10382	129	2517
1973	31	8388	111	2191
1972	36	5887	130	3869
1971	38	10831	119	1879
1970	75	38633	173	1168
1969	45	8456	179	1353
1968	47	7655	184	1109
1967	58	7469	40	4333
1966	90	8087	44	4507
1965	84	7867	235	1202
1964	68	7057	184	972
1963	45	6487	198	891
1962	54	5531	242	673
1961	72	4695	247	2620
1960	64	5722	221	800
1959	73	5344	238	765
1958	96	5211	261	821
1957	101	5219	277	683
1956	122	4281	213	616

Source: *Virginia Division of Mines Annual Reports, 1956-1988.*

Southwest Virginia Coalfield — Buchanan County
Production, Productivity, Price & Distribution: 1975-1932
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	447	6653	14064	127	16.64	32.15	11410	2606	48	na
1974	332	5938	14268	152	15.83	26.85	11456	2792	20	na
1973	312	5731	13510	217	10.85	10.96	na	na	na	na
1972	310	5215	13202	218	11.61	12.04	na	na	na	na
1971	337	4825	12275	209	12.19	8.61	11718	557	na	na
1970	485	5222	14814	210	13.55	7.02	14233	578	3	na
1969	460	5378	14784	207	14.28	5.64	14378	367	3	na
1968	478	4890	15804	206	15.06	4.89	14876	925	3	na
1967	571	6517	15529	185	13.31	4.54	14387	1141	1	na
1966	711	6391	16287	202	12.62	4.13	13352	2935	1	na
1965	807	6870	15291	202	11.01	3.92	12770	2521	na	na
1964	855	5156	14502	242	11.64	3.96	12094	2406	1	na
1963	883	6751	13141	202	9.60	3.85	11008	2132	1	na
1962	808	6714	11997	201	8.91	3.77	9912	2083	2	na
1961	688	6773	10949	193	8.36	3.75	9080	1863	7	na
1960	800	6761	10568	200	7.83	4.18	8488	2071	10	na
1959	742	7151	10320	192	7.52	4.36	7502	2802	15	na
1958	796	6681	9569	202	7.11	4.51	8284	1272	13	na
1957	773	6427	10481	212	7.69	4.79	8403	2067	11	na
1956	550	6056	9430	197	7.89	4.84	8240	1181	9	na
1955	na	6215	8913	201	7.15	4.53	7188	1713	12	na
1954	na	4299	5394	181	7.06	4.18	4432	9520	10	na
1953	na	4269	5641	192	6.89	5.29	5461	163	16	na
1952	na	4943	6365	196	6.58	5.37	6177	166	22	na
1951	na	na	6586	na	na	na	na	na	na	na
1950	na	4047	4722	177	6.58	5.58	4654	56	12	na
1949	na	4605	4424	159	6.04	5.64	4369	40	15	na
1948	na	4013	4914	219	5.59	6.19	4890	3	22	na
1947	na	3632	5398	250	5.95	4.85	5348	16	33	na
1946	na	3485	4473	236	5.43	3.71	4429	22	21	1
1945	na	3366	5208	282	5.42	3.35	5165	23	20	na
1944	na	3994	5923	302	4.91	3.19	5887	17	16	2
1943	na	4366	5967	274	4.99	2.98	5937	14	14	2
1942	na	4492	5979	241	5.53	2.60	5950	4	22	3
1941	na	4301	5553	219	5.89	2.32	5521	10	10	3
1940	na	4104	4874	205	5.81	1.84	4860	4	10	1
1939	na	na	4281	na	na	na	na	na	na	na
1938	na	3615	3742	189	5.47	na	3732	5	6	1
1937	na	3391	3602	211	5.04	na	3590	4	5	2
1936	na	2540	2235	191	4.61	na	2226	4	5	1
1935	na	1385	1361	199	4.93	1.52	1357	3	1	na
1934	na	758	573	169	4.49	1.56	573	na	1	na
1933	na	284	279	226	4.34	1.17	278	na	1	na
1932	na	216	41*	130	1.45	2.10	39	na	1	1

Note: Figures rounded — may not add. (*) Pulaski County production included.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1933-1975.

Southwest Virginia Coalfield — Dickenson County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	104	1070	2450	4376	8000	0	1666	4665	1659
1987	228	1255	3204	3645	8333	0	2157	4311	1859
1986	32	1188	3357	3535	8111	0	2351	4378	1381
1985	48	936	3084	2994	7063	0	2381	2165	919
1984	16	927	2509	3697	7149	0	1829	3689	688
1983	39	1194	2135	3628	6996	0	3238	2467	291
1982	18	1236	2034	3295	6583	0	3089	3494	0
1981	12	1014	1787	3289	6102	0	2937	3165	0
1980	11	1033	1917	2924	5884	0	2473	3369	0
1979	0	941	1233	2360	4533	0	1988	2507	0
1978	3	1215	951	1794	3963	0	1906	2056	0
1977	65	1461	1505	1697	4728	0	2410	2318	0
1976	97	1411	2042	1749	5299	0	2750	2548	0
1975	25	1225	2429	1693	5372	1	2565	2806	0
1974	65	1473	2430	1560	5528	1	3138	2391	0
1973	135	902	2446	1313	4796	0	3236	1560	0
1972	154	1623	3492	969	6237	0	4926	1311	0
1971	179	1322	3581	551	5634	0	4437	1198	0
1970	264	983	5146	755	7147	25	5538	1585	0
1969	287	872	5973	821	7953	68	6016	1869	0
1968	268	1344	6060	1022	8694	260	6440	1994	0
1967	281	1173	6363	1765	9581	510	6029	3042	0
1966	446	1084	5592	2198	9320	1160	8160	0	0
1965	218	637	5287	2701	8842	1458	7384	0	0
1964	160	531	5226	1823	7741	1462	6279	0	0
1963	304	640	5486	1836	8267	1533	6733	0	0
1962	175	484	5875	1736	8270	1311	6959	0	0
1961	28	153	6948	1301	8430	964	7466	0	0
1960	7	172	5764	1187	7130	860	6720	0	0
1959	20	202	5910	1450	7583	1044	6519	0	0
1958	12	265	3451	1392	5119	941	4178	0	0
1957	78	483	2208	2227	4996	1295	3700	0	0
1956	68	18	3438	1275	4800	2044	2755	0	0
1955	6	53	2302	1193	3556	na	na	0	0
1954	29	195	1925	941	3090	na	na	0	0
1953	67	611	2307	1346	4331	na	na	0	0
1952	0	1189	2942	1015	5146	na	na	0	0
1951	0	377	2908	1168	4453	na	na	0	0
1950	0	478	2033	917	3428	na	na	0	0
1949	0	392	1661	1140	3192	na	na	0	0
1948	0	344	1930	861	3144	na	na	0	0
1947	0	243	1871	530	2644	na	na	0	0
1946	0	7	1278	256	1541	na	na	0	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Dickenson County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	89	2062	217	22203	102	17.88	5.72	62	20024
1987	111	2296	196	24863	127	18.52	6.85	62	9524
1986	115	2421	183	22570	123	18.31	6.72	60	42469
1985	108	2159	na	25445	na	na	7.78	67	8827
1984	107	2280	na	24863	na	na	7.93	76	18540
1983	93	1961	178	28314	159	20.04	7.94	68	17216
1982	119	2178	144	24995	174	20.99	8.29	65	20293
1981	134	1984	131	26191	200	23.48	8.52	75	14336
1980	120	2070	152	21848	144	18.68	7.71	79	11405
1979	102	1877	158	19778	125	15.29	8.18	73	8860
1978	107	1657	146	16908	116	16.38	7.08	59	9749
1977	138	1880	123	17463	142	20.44	6.94	334	14706
1976	121	1978	128	15052	118	20.93	5.63	67	6832
1975	128	1847	106	16073	152	27.44	5.54	71	7007
1974	89	1655	128	12817	100	26.10	3.83	54	7114
1973	85	1626	122	12083	99	24.17	4.10	52	6519
1972	86	1830	na	10386	na	na	3.05	65	4729
1971	91	1611	105	11088	106	33.30	3.17	48	6471
1970	95	1767	234	8738	37	17.29	2.16	51	4851
1969	84	1562	209	7985	38	24.36	1.57	40	4243
1968	107	1775	219	7031	32	22.36	1.44	34	4023
1967	103	2013	232	6890	30	20.52	1.45	59	7483
1966	158	1934	227	5820	26	21.14	1.21	53	6673
1965	171	1860	227	5209	23	20.94	1.10	138	6733
1964	190	1898	229	4693	20	17.81	1.15	120	7620
1963	189	2058	228	4969	22	17.62	1.24	162	7014
1962	142	1972	222	5493	25	18.89	1.31	179	7288
1961	136	1846	218	4984	23	20.94	1.09	168	7516
1960	136	1940	217	4854	22	16.85	1.32	164	8170
1959	156	2174	234	4989	21	14.91	1.30	166	7511
1958	170	1907	206	3762	18	13.03	1.40	154	5924
1957	152	2414	232	4738	20	10.18	2.01	89	7087
1956	184	2308	241	4344	18	9.99	1.71	98	5242
1955	na	2045	292	na	na	5.95	na	na	na
1954	na	1910	183	na	na	8.84	na	na	na
1953	na	2376	204	na	na	8.94	na	na	na
1952	na	3041	214	na	na	7.91	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	2579	167	na	na	7.96	na	na	na
1949	na	2750	163	na	na	7.12	na	na	na
1948	na	2013	218	na	na	7.14	na	na	na
1947	na	1861	256	na	na	5.55	na	na	na
1946	na	1167	233	na	na	4.91	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Dickenson County
Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	7	22	97	7896	81	104	48.82	1.67	0	0
1987	13	38	106	13573	128	228	56.48	2.26	1	13500
1986	8	58	184	13326	72	32	2.99	24.22	5	0
1985	8	42	na	23008	na	48	na	20.04	7	143
1984	6	9	na	14345	na	16	na	8.13	0	0
1983	4	7	104	23114	222	39	53.40	4.16	2	4466
1982	1	6	72	22910	318	18	41.92	7.59	1	2000
1981	4	3	29	13990	482	12	141.15	3.42	1	125
1980	2	3	50	6937	138	11	70.15	1.98	1	30
1979	0	0	0	0	0	0	0	0	0	0
1978	1	1	18	2638	147	3	179.22	0.82	1	116
1977	10	11	59	16593	281	65	100.20	2.81	9	300
1976	7	28	113	18200	161	97	30.80	5.23	4	988
1975	10	39	61	13856	227	25	10.62	21.39	3	18383
1974	10	56	78	13907	172	65	14.86	11.58	3	7433
1973	13	53	77	7103	181	135	33.17	5.44	4	5250
1972	14	29	na	6446	na	154	na	1.34	4	2556
1971	17	17	57	5293	111	179	184.95	0.61	1	1080
1970	13	17	na	7926	na	264	na	0.34	1	1400
1969	10	15	na	5656	na	287	na	0.41	3	1900
1968	16	29	na	4634	na	268	na	0.61	2	5890
1967	11	28	na	5437	na	281	na	0.46	1	800
1966	12	42	na	4105	na	446	na	0.51	1	2750
1965	11	26	na	5213	na	218	na	0.49	1	700
1964	12	25	na	4878	na	160	na	0.81	2	1500
1963	8	36	na	5000	na	304	na	0.58	6	1562
1962	6	25	na	4393	na	175	na	0.71	4	3300
1961	1	4	na	4491	na	28	na	0.62	0	0
1960	1	1	na	7501	na	7	na	1.15	0	0
1959	3	7	na	4282	na	20	na	1.51	1	3000
1958	1	17	na	4524	na	12	na	6.56	5	4024
1957	3	3	na	4745	na	78	na	0.18	1	2050
1956	na	6	na	7279	na	68	na	0.64	1	330
1955	na	na	na	na	na	6	na	na	na	na
1954	na	na	na	na	na	29	na	na	na	na
1953	na	na	na	na	na	67	na	na	na	na

Note: No auger mines reported prior to 1953.

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Southwest Virginia Coalfield — Dickenson County
Strip Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	22	217	211	20312	96	1304	14.11	4.12	12	5830
1987	31	346	128	15195	119	1255	28.34	4.18	23	5738
1986	26	311	163	15992	98	1188	23.43	4.19	20	50695
1985	19	224	na	21209	na	936	na	5.07	10	10786
1984	21	229	na	19945	na	927	na	4.93	10	19923
1983	17	208	168	30444	181	1194	34.16	5.30	10	17822
1982	27	193	111	29650	267	1236	57.69	4.63	9	18631
1981	40	162	82	25043	305	1014	76.32	4.00	18	9890
1980	24	159	132	22495	170	1033	49.20	1.87	21	7976
1979	25	178	123	15418	153	941	42.97	3.55	18	7886
1978	32	282	168	18156	108	1215	25.65	4.21	18	9699
1977	50	301	125	16174	129	1461	38.84	3.33	51	14227
1976	59	315	114	14168	124	1411	39.28	3.16	22	5739
1975	53	284	114	15775	138	1225	37.83	3.67	22	6121
1974	42	223	112	12225	109	1473	58.98	1.85	13	3228
1973	33	138	107	11515	108	902	61.11	1.76	13	4927
1972	38	235	na	8869	na	1623	na	1.28	15	2057
1971	39	167	89	9775	110	1322	88.97	1.23	9	5676
1970	24	91	na	8721	na	983	na	0.81	10	1605
1969	15	81	na	6881	na	872	na	0.63	3	2192
1968	19	85	na	6792	na	1344	na	0.43	5	3425
1967	16	92	na	7359	na	1173	na	0.58	4	5415
1966	18	74	na	5954	na	1084	na	0.41	2	3475
1965	14	78	na	5698	na	637	na	0.70	1	4700
1964	11	68	na	5253	na	531	na	0.67	3	3583
1963	10	72	na	5964	na	640	na	0.67	6	5928
1962	8	57	na	6795	na	484	na	0.80	7	4057
1961	6	32	na	3795	na	153	na	0.80	1	1800
1960	5	32	na	4575	na	172	na	0.85	2	1150
1959	5	40	na	5184	na	202	na	1.03	3	4291
1958	7	38	na	2886	na	265	na	0.41	1	600
1957	12	56	na	6036	na	483	na	0.70	7	1237
1956	1	5	na	1135	na	18	na	0.31	1	255
1955	2	na	na	na	na	53	na	na	na	na
1954	2	na	na	na	na	195	na	na	na	na
1953	3	130	na	na	na	611	na	na	na	na
1952	5	203	na	na	na	1189	na	na	na	na
1951	1	na	na	na	na	377	na	na	na	na
1950	2	125	na	na	na	478	na	na	na	na
1949	na	na	na	na	na	392	na	na	na	na
1948	na	na	na	na	na	344	na	na	na	na
1947	1	54	na	na	na	243	na	na	na	na
1946	1	na	na	na	na	7	na	na	na	na

Note: No strip mines reported prior to 1946.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Dickenson County
Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	6	740	226	26040	115	2450	0	1231	1219	14.65	7.87
1987	8	860	241	33948	141	3204	33	1735	1437	15.46	9.11
1986	8	842	248	35773	144	3357	0	2010	1347	16.08	8.97
1985	8	879	na	31443	na	3084	0	2165	919	na	8.96
1984	10	949	na	28354	na	2509	0	1821	688	na	10.72
1983	9	879	223	29095	130	2135	0	1844	291	10.89	11.98
1982	14	950	145	25597	177	2034	0	2034	0	14.76	11.95
1981	12	811	193	27532	143	1787	0	1787	0	11.42	12.49
1980	12	830	212	23156	109	1917	0	1875	42	10.90	10.02
1979	11	822	206	20082	97	1233	0	1195	38	7.28	13.39
1978	11	706	152	15418	101	951	0	951	0	8.86	11.45
1977	15	893	142	20762	146	1505	0	1505	0	11.87	12.32
1976	11	1053	172	15903	92	2042	118	1924	0	11.27	8.20
1975	11	1047	180	16865	94	2429	392	2036	0	12.89	7.27
1974	10	979	191	13463	70	2430	480	1950	0	13.00	5.42
1973	11	1117	202	12510	62	2446	1154	1292	0	10.84	5.71
1972	10	1311	na	10744	na	3492	2341	1150	0	na	4.03
1971	13	1287	172	11829	69	3581	2399	1182	0	16.18	4.25
1970	11	1399	na	9521	na	5146	3609	1537	Hand	na	2.59
1969	8	1113	na	9453	na	5973	4162	1811	0	na	1.76
1968	12	1278	na	7857	na	6060	4381	1680	0	na	1.66
1967	11	1315	na	7851	na	6363	3779	2584	0	na	1.62
1966	11	1083	na	7227	na	5592	4592	0	0	na	1.40
1965	7	920	na	6628	na	5287	5287	0	0	na	1.15
1964	9	931	na	6296	na	5226	5226	0	0	na	1.12
1963	7	1046	na	6589	na	5486	5486	0	0	na	1.26
1962	9	1059	na	7512	na	5875	5875	0	0	na	1.35
1961	8	1087	na	6592	na	6948	6948	0	0	na	1.04
1960	13	1180	na	6344	na	5764	5764	0	0	na	1.30
1959	9	1197	na	6049	na	5910	5910	0	0	na	1.23
1958	9	891	na	4974	na	3451	3451	0	0	na	1.28
1957	5	951	na	6694	na	2208	2197	0	11	na	2.88
1956	na	1094	na	5526	na	3438	2269	0	1169	na	1.76
1955	na	na	na	na	na	2302	na	0	na	na	na
1954	na	na	na	na	na	1925	na	0	na	na	na
1953	na	na	na	na	na	2307	na	0	na	na	na
1952	na	na	na	na	na	2942	na	0	na	na	na
1951	na	na	na	na	na	2908	na	0	na	na	na
1950	na	na	na	na	na	2033	na	0	na	na	na
1949	na	na	na	na	na	1661	na	0	na	na	na
1948	na	na	na	na	na	1930	na	0	na	na	na
1947	na	na	na	na	na	1871	na	0	na	na	na
1946	na	na	na	na	na	1278	na	0	na	na	na

Note: (*) MA = Machine; CM = Continuous miner; LW = Longwall. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Dickenson County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	Hand	MA+	CM+	Man Day	Ton
1988	54	1083	214	20250	95	4376	0	492*	3434	18.88	5.01
1987	59	1052	185	21024	114	3645	0	647*	2576	18.73	6.07
1986	73	1210	144	15515	108	3535	0	1133*	2369	20.29	5.31
1985	73	1014	na	21282	na	2994	0	1396	1598	na	7.21
1984	70	1093	na	22949	na	3697	0	1829	1868	na	6.78
1983	63	867	179	27053	151	3628	0	2006	1622	23.38	6.46
1982	77	1029	156	23579	151	3295	0	1835	1460	10.51	7.36
1981	78	1008	152	25332	167	3289	0	1911	1377	21.46	7.76
1980	82	1078	152	20787	137	2924	0	1430	1494	17.84	7.66
1979	66	877	164	19699	120	2360	0	1048	1312	7.96	7.32
1978	63	668	136	17976	132	1794	0	688	1106	19.74	6.70
1977	63	675	128	13687	107	1697	0	883	813	19.64	5.45
1976	44	582	137	13836	101	1749	0	1124	625	21.94	4.60
1975	54	477	92	14692	160	1693	1	923	770	38.59	4.13
1974	27	397	148	11469	77	1560	1	1119	441	26.56	2.82
1973	28	318	129	10526	82	1313	0	1044	268	32.00	2.55
1972	24	255	na	10322	na	969	0	808	161	na	2.72
1971	39	150	130	5976	46	551	0	536	16	28.28	1.62
1970	47	260	na	4755	na	755	25	682	48	na	1.64
1969	51	303	na	4195	na	821	68	695	59	na	1.55
1968	60	383	na	4433	na	1022	260	447	315	na	1.66
1967	65	578	na	4720	na	1765	510	797	458	na	1.55
1966	117	735	na	3754	na	2198	1160	1037	0	na	1.26
1965	139	836	na	3635	na	2701	1458	1243	0	na	1.13
1964	158	874	na	2926	na	1823	1462	362	0	na	1.40
1963	164	904	na	3019	na	1836	1533	303	0	na	1.49
1962	119	831	na	2845	na	1736	1311	425	0	na	1.36
1961	121	723	na	2531	na	1301	964	337	0	na	1.41
1960	117	727	na	2444	na	1187	860	328	0	na	1.50
1959	139	930	na	2554	na	1450	1044	406	0	na	1.64
1958	153	961	na	2660	na	1392	941	450	0	na	1.84
1957	132	1105	na	2990	na	2227	1284	943	0	na	1.48
1956	na	789	na	2702	na	1275	875	400	0	na	1.67
1955	na	na	na	na	na	1193	na	na	na	na	na
1954	na	na	na	na	na	941	na	na	na	na	na
1953	na	na	na	na	na	1346	na	na	na	na	na
1952	na	na	na	na	na	1015	na	na	na	na	na
1951	na	na	na	na	na	1168	na	na	na	na	na
1950	na	na	na	na	na	917	na	na	na	na	na
1949	na	na	na	na	na	1140	na	na	na	na	na
1948	na	na	na	na	na	861	na	na	na	na	na
1947	na	na	na	na	na	530	na	na	na	na	na
1946	na	na	na	na	na	256	na	na	na	na	na

Note: (+) MA = Machine; CM = Continuous miner. (*) Longwall production 1988 = 449,729 tons; 1987 = 422,274 tons; 1986 = 33,368 tons. No longwall reports for other years. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

**Southwest Virginia Coalfield — Dickenson County
Office Workers at Underground Mines: 1988-1956**

Year	Tipple Mines		Truck Mines	
	#	\$/Year	#	\$/Year
1988	10	20100	40	24264
1987	4	0	34	13089
1986	4	24618	31	45800
1985	11	24788	39	5382
1984	21	19396	45	17833
1983	20	26854	36	12402
1982	21	35465	34	11899
1981	15	30567	41	10696
1980	22	18855	35	6826
1979	22	12987	33	6641
1978	15	18147	25	5132
1977	83	22258	20	3340
1976	25	11212	16	2954
1975	24	11525	22	1412
1974	26	10717	12	3574
1973	24	9308	11	2777
1972	30	7833	16	1958
1971	33	7297	5	894
1970	29	7341	11	1549
1969	17	7579	17	1683
1968	13	6935	14	1266
1967	48	7694	7	7099
1966	43	6995	7	6168
1965	103	8216	33	2352
1964	88	9854	27	1240
1963	110	9682	40	660
1962	128	9634	40	745
1961	133	9177	34	1188
1960	141	9291	21	1314
1959	141	8592	21	924
1958	116	7561	32	454
1957	42	13579	39	2154
1956	70	6968	26	974

Source: Virginia Division of Mines Annual Reports, 1956-1988.

Southwest Virginia Coalfield — Dickenson County
Production, Productivity, Price & Distribution: 1975-1936
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	128	1847	5372	106	27.43	33.99	4887	470	na	na
1974	74	1655	5524	128	26.09	24.70	5450	74	na	na
1973	79	1850	4795	224	11.57	11.72	na	na	na	na
1972	87	1830	6235	na	na	9.71	na	na	na	na
1971	71	900	5618	105	33.30	na	5553	65	na	na
1970	87	1885	7147	234	16.39	7.69	6856	291	na	na
1969	68	2170	8399	219	19.23	5.43	8014	385	na	na
1968	88	1775	9062	na	na	5.02	8769	293	na	na
1967	98	2210	9529	232	18.77	4.85	8948	631	na	na
1966	116	2167	9339	227	18.99	4.28	8449	891	1	na
1965	135	1842	8835	227	21.10	4.26	7946	889	1	na
1964	154	1534	7728	229	21.97	3.69	7683	808	57	na
1963	169	2072	8257	228	17.49	3.97	8231	145	36	<1
1962	83	2245	8356	222	16.74	4.20	7742	614	54	<1
1961	117	2128	8438	218	18.18	4.14	7794	644	14	<1
1960	100	1793	7120	217	18.33	4.17	7101	19	4	<1
1959	114	2134	7569	234	15.88	4.68	6670	899	19	<1
1958	153	2432	5156	206	10.33	4.82	3838	1328	50	<1
1957	64	2414	5268	232	9.42	5.00	4992	186	34	89
1956	184	2308	4793	241	8.61	5.31	3917	852	25	24
1955	na	2045	3891	292	6.51	4.61	3801	90	na	<1
1954	na	1910	3110	183	8.90	4.37	2904	185	na	22
1953	na	2376	4330	204	8.93	5.24	4181	134	na	15
1952	na	3041	5109	214	7.83	4.94	4258	850	na	1
1951	na	na	4453	na	na	na	na	na	na	na
1950	na	2579	3094	167	7.19	5.21	3023	70	na	1
1949	na	2750	2575	163	5.76	5.38	2508	66	na	1
1948	na	2013	2297	218	5.23	6.12	2296	<1	na	1
1947	na	1861	2578	256	5.42	5.11	2573	2	na	3
1946	na	1167	1334	233	4.91	3.83	1320	2	na	1
1945	na	1426	1578	291	3.81	3.35	1562	3	11	1
1944	na	1584	1676	295	3.59	3.08	1660	4	12	1
1943	na	1742	2010	298	3.87	2.80	1989	8	11	1
1942	na	2008	2083	270	3.84	2.44	2060	13	9	1
1941	na	2148	2075	262	3.69	2.26	2046	22	7	1
1940	na	1773	1768	246	4.05	1.82	1746	14	7	1
1939	na	na	1552	na	na	na	na	na	na	na
1938	na	1789	1370	225	3.41	na	1356	7	7	1
1937	na	1549	1743	258	4.36	na	1723	7	9	1
1936	na	1397	1340	231	4.16	na	1326	1	14	1

Note: Figures rounded — may not add.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1936-1975.

Southwest Virginia Coalfield — Dickenson County
Production, Productivity, Price & Distribution: 1935-1917
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1935	na	1262	1129	211	4.23	1.66	1115	1	12	1
1934	na	1184	1176	239	4.15	1.58	1161	1	12	1
1933	na	899	964	213	5.04	1.04	952	<1	12	<1
1932	na	810	770	131	7.26	1.01	754	na	15	<1
1931	na	921	1046	197	5.76	1.18	1028	na	17	1
1930	na	847	987	228	5.10	1.31	969	na	16	2
1929	na	807	809	221	4.53	1.38	800	na	7	1
1928	na	839	796	213	4.46	1.45	785	na	9	2
1927	5	900	1058	256	4.18	1.58	1045	na	9	4
1926	na	1004	1115	282	3.94	1.71	1101	na	10	5
1925	na	843	1003	290	4.18	1.66	1011	na	7	4
1924	na	828	794	224	4.27	1.99	784	na	6	5
1923	na	952	925	225	4.32	2.69	903	na	8	14
1922	na	815	870	214	4.99	2.59	845	na	10	14
1921	na	655	448	191	3.58	3.89	434	na	5	10
1920	na	970	615	263	2.41	4.08	595	na	6	14
1919	na	855	472	244	2.26	2.54	456	na	5	11
1918	na	187	111	241	2.46	2.54	105	na	1	5
1917	na	78	14	95	1.83	2.37	14	na	<1	<1

Note: Figures rounded — may not add.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1917-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1935.

Southwest Virginia Coalfield — Lee County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	79	93	1191	1204	2566	0	189	1251	1127
1987	99	120	1500	1400	3118	0	239	1468	1193
1986	130	71	1139	991	2331	0	172	1225	732
1985	7	13	783	972	1776	0	154	1412	210
1984	11	56	742	1225	2044	0	374	1670	0
1983	24	70	751	1037	1892	<1	278	1614	0
1982	38	173	679	811	1701	1	437	1263	0
1981	96	151	399	567	1213	0	455	757	0
1980	77	196	443	464	1180	3	479	697	0
1979	66	112	410	369	958	0	240	718	0
1978	109	302	291	302	1003	0	493	510	0
1977	243	530	274	279	1326	<1	912	413	0
1976	112	563	224	402	1300	3	773	524	0
1975	130	399	98	421	1048	0	592	456	0
1974	66	195	160	545	966	0	281	685	0
1973	92	239	180	626	1138	6	441	691	0
1972	135	227	90	593	1045	21	508	517	0
1971	73	328	69	409	879	14	551	314	0
1970	258	322	0	546	1127	57	750	320	0
1969	189	290	0	407	887	59	614	214	0
1968	110	307	16	799	1232	118	564	550	0
1967	74	307	49	410	840	215	609	16	0
1966	19	57	38	321	436	261	174	0	0
1965	0	8	72	408	489	434	55	0	0
1964	9	1	66	410	485	397	88	0	0
1963	37	6	72	405	520	408	112	0	0
1962	25	8	74	363	470	432	38	0	0
1961	60	39	119	258	476	377	99	0	0
1960	147	92	134	270	642	403	239	0	0
1959	0	57	156	242	455	392	83	0	0
1958	12	12	168	194	386	346	39	0	0
1957	0	1	207	185	393	320	73	0	0
1956	0	0	451	215	666	534	133	0	0
1955	0	4	549	153	706	na	na	0	0
1954	108	23	361	146	637	na	na	0	0
1953	76	31	610	191	909	na	na	0	0
1952	0	0	858	208	1066	na	na	0	0
1951	0	0	954	148	1103	na	na	0	0
1950	0	0	1102	192	1294	na	na	0	0
1949	0	3	900	137	1040	na	na	0	0
1948	0	53	1486	219	1758	na	na	0	0
1947	0	0	1650	291	1941	na	na	0	0
1946	0	0	1480	169	1649	na	na	0	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Lee County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	31	535	202	28068	139	23.75	5.85	18	17087
1987	37	698	200	24789	124	22.34	5.55	27	18150
1986	43	805	157	19980	128	18.44	6.94	21	36414
1985	34	651	na	22966	na	na	8.42	20	21303
1984	33	676	na	24504	na	na	8.11	23	16807
1983	38	549	116	25069	216	29.71	7.27	21	18280
1982	63	561	84	23434	279	36.10	7.30	19	15781
1981	55	445	109	23886	219	25.00	8.76	26	16379
1980	50	431	121	19393	160	22.62	7.07	28	14732
1979	36	319	122	17662	145	24.61	5.89	18	11250
1978	45	315	116	17409	150	27.46	5.46	57	17813
1977	61	451	124	15398	124	23.70	5.24	54	10577
1976	64	420	114	14039	123	27.15	4.20	40	19151
1975	64	467	122	10962	90	18.40	4.89	41	17413
1974	44	360	115	11393	99	23.34	4.24	31	15359
1973	30	313	145	11211	77	25.08	3.07	15	6413
1972	36	306	na	9859	na	na	2.89	65	3615
1971	50	266	92	8053	88	35.90	2.44	10	9685
1970	57	282	211	6646	31	17.68	1.66	10	6441
1969	57	243	177	4410	25	17.11	1.21	12	6909
1968	66	253	na	4524	na	na	0.93	12	6119
1967	72	261	na	4120	na	na	1.28	9	6737
1966	88	263	168	3329	20	9.86	2.01	3	5515
1965	103	377	180	3079	17	6.89	2.37	9	1872
1964	121	396	178	2803	16	7.03	2.29	7	2559
1963	126	428	175	2663	15	6.94	2.19	15	1911
1962	129	433	146	2427	17	7.43	2.24	17	1774
1961	136	435	152	2340	15	7.35	2.14	13	2833
1960	133	507	177	2453	14	7.16	1.94	16	2939
1959	146	461	117	3202	27	8.43	3.24	32	4503
1958	116	447	178	2774	16	6.10	3.22	358	3121
1957	94	495	153	2935	19	5.19	3.69	15	3041
1956	47	704	172	3413	20	5.50	3.60	16	3414
1955	na	761	163	na	na	5.69	na	na	na
1954	na	630	169	na	na	5.99	na	na	na
1953	na	923	160	na	na	6.15	na	na	na
1952	na	961	181	na	na	6.13	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	1145	180	na	na	6.28	na	na	na
1949	na	1211	149	na	na	5.76	na	na	na
1948	na	1191	208	na	na	7.10	na	na	na
1947	na	860	227	na	na	9.94	na	na	na
1946	na	733	197	na	na	11.42	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Lee County
Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons	Wage(\$)	Office Workers	
				\$/Year	\$/Day		Man Day	Ton	#	\$/Year
1988	3	35	216	36662	168	79	10.39	16.34	0	0
1987	4	30	187	32530	174	99	17.57	9.91	0	0
1986	5	30	127	21141	167	130	34.19	4.87	2	43419
1985	4	19	na	23080	na	7	na	60.65	0	0
1984	5	7	na	7851	na	11	na	5.18	0	0
1983	5	3	74	31246	422	24	108.33	4.65	1	50
1982	8	10	31	23875	770	38	123.84	4.98	0	0
1981	13	17	64	8000	125	96	88.08	1.42	2	13964
1980	8	20	101	13163	130	77	38.08	3.42	1	0
1979	6	18	71	17218	243	66	51.90	4.67	1	5200
1978	7	17	69	7991	116	109	92.73	1.25	2	26000
1977	16	63	107	13862	130	243	36.04	3.59	13	13445
1976	12	22	67	10860	162	112	75.78	2.14	1	4000
1975	8	38	117	12933	118	130	29.29	3.77	3	22517
1974	6	20	113	12967	115	66	29.18	3.93	2	2800
1973	7	19	98	10120	103	92	49.50	2.09	0	0
1972	11	19	na	12903	na	135	na	1.81	4	50
1971	7	10	81	8142	101	73	90.11	1.12	1	100
1970	9	22	na	5768	na	258	na	0.49	1	3600
1969	13	28	na	3578	na	189	na	0.52	2	4035
1968	9	18	na	4566	na	110	na	0.75	2	1090
1967	5	11	na	3467	na	74	na	0.52	1	200
1966	1	5	na	3782	na	19	na	1.00	0	0
1965	0	0	0	0	0	0	0	0	0	0
1964	3	4	na	1650	na	9	na	0.75	0	0
1963	4	4	na	2987	na	37	na	0.3	4	1725
1962	2	4	na	3870	na	25	na	0.62	0	0
1961	3	8	na	3928	na	60	na	0.53	2	2300
1960	4	14	na	2427	na	147	na	0.23	0	210
1959	7	46	na	4907	na	-	na	-	9	9329
1958	5	4	na	5400	na	12	na	1.85	1	0
1957	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0
1954	na	na	na	na	na	108	na	na	na	na
1953	na	na	na	na	na	76	na	na	na	na

Note: No auger mines reported prior to 1953.

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Southwest Virginia Coalfield — Lee County
Strip Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	3	31	235	40741	173	93	12.78	13.57	0	0
1987	7	41	164	25163	154	120	17.81	8.62	1	0
1986	10	64	64	12353	131	71	17.25	11.19	3	28946
1985	6	21	na	20015	na	13	na	41.11	0	0
1984	5	47	na	8100	na	56	na	5.73	2	4000
1983	8	27	92	8066	88	70	28.04	3.13	1	450
1982	27	66	65	12882	198	173	40.39	4.91	4	14329
1981	23	60	74	18329	248	151	34.09	7.27	3	962
1980	16	74	121	19667	163	196	21.85	3.28	6	3671
1979	14	48	96	15264	159	112	24.38	6.52	1	2000
1978	16	90	132	18868	143	302	25.43	5.62	38	21116
1977	26	113	113	14663	130	530	24.16	3.13	18	7424
1976	26	128	133	13873	104	563	33.05	3.16	14	18566
1975	36	121	107	9926	93	399	30.80	3.01	20	13971
1974	17	67	106	10776	102	195	27.53	3.69	13	8320
1973	8	38	109	11803	108	239	57.79	1.87	4	2563
1972	15	53	na	8412	na	227	na	1.96	15	2241
1971	12	42	84	7170	85	328	92.92	0.92	1	1200
1970	12	63	na	5424	na	322	na	1.06	5	9739
1969	14	68	na	4556	na	290	na	1.07	8	8355
1968	10	43	na	5760	na	307	na	0.81	6	9912
1967	6	35	na	6722	na	307	na	0.77	4	11654
1966	6	8	na	5302	na	57	na	0.83	0	0
1965	4	4	na	3713	na	8	na	1.78	0	0
1964	1	2	na	3551	na	1	na	6.93	1	900
1963	2	7	na	2921	na	6	na	3.24	1	850
1962	2	4	na	2313	na	8	na	1.23	0	0
1961	3	12	na	4163	na	39	na	1.28	2	2250
1960	3	22	na	4809	na	92	na	1.16	5	3000
1959	5	12	na	4598	na	57	na	0.96	2	2218
1958	3	4	na	2531	na	12	na	0.84	0	0
1957	1	2	na	1582	na	1	na	2.14	1	300
1956	0	0	0	0	0	0	na	0	0	0
1955	na	na	na	na	na	4	na	na	na	na
1954	na	na	na	na	na	23	na	na	na	na
1953	na	na	na	na	na	31	na	na	na	na
1952	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0
1949	na	na	na	na	na	3	na	na	na	na
1948	na	na	na	na	na	53	na	na	na	na
1947	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Lee County
Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	1	124	250	38764	155	1191	0	64	1127	38.42	4.04
1987	1	205	247	35078	142	1500	0	307	1193	29.62	4.79
1986	1	228	235	34193	146	1139	0	407	732	21.25	6.85
1985	1	222	na	31120	na	783	0	573	210	na	8.82
1984	1	247	na	33043	na	742	0	742	0	na	11.00
1983	1	236	243	28892	119	761	0	761	0	13.09	8.96
1982	2	231	128	27117	212	679	0	678	0	22.96	9.23
1981	2	164	230	30781	134	399	0	399	0	10.57	12.67
1980	2	168	246	20831	85	443	71	372	42	10.72	7.94
1979	2	131	178	18807	106	410	0	410	38	17.58	6.01
1978	4	98	93	20636	222	291	9	282	0	31.94	6.95
1977	2	108	194	18502	95	274	0	274	0	13.09	7.29
1976	2	83	236	16619	70	224	0	224	0	11.45	6.15
1975	3	62	55	8394	153	98	3	95	0	28.75	5.31
1974	1	53	222	13225	60	160	0	160	0	16.61	4.39
1973	1	41	241	11113	46	180	0	180	0	18.25	2.53
1972	1	30	na	9308	na	90	0	90	0	na	3.10
1971	2	26	105	7290	69	69	0	69	0	25.38	2.88
1970	0	0	0	0	0	0	0	0	Hand	0	0
1969	0	0	0	0	0	0	0	0	0	0	0
1968	2	12	na	2393	na	16	6	0	10	na	1.80
1967	2	34	na	4032	na	49	33	0	16	na	2.88
1966	2	27	na	3628	na	38	0	0	38	na	2.57
1965	2	72	na	3337	na	72	0	0	72	na	3.32
1964	2	66	na	3206	na	66	0	0	66	na	3.21
1963	2	75	na	3423	na	72	0	0	72	na	3.57
1962	3	83	na	3301	na	74	0	0	74	na	3.70
1961	4	130	na	3218	na	119	0	0	119	na	3.52
1960	3	146	na	3386	na	134	0	0	134	na	3.69
1959	6	155	na	3660	na	156	0	0	156	na	4.64
1958	6	190	na	3723	na	168	9	0	159	na	4.22
1957	6	231	na	3827	na	207	25	0	182	na	4.27
1956	na	414	na	4695	na	451	107	0	344	na	4.08
1955	na	na	na	na	na	549	na	0	na	na	na
1954	na	na	na	na	na	361	na	0	na	na	na
1953	na	na	na	na	na	610	na	0	na	na	na
1952	na	na	na	na	na	858	na	0	na	na	na
1951	na	na	na	na	na	954	na	0	na	na	na
1950	na	na	na	na	na	1102	na	0	na	na	na
1949	na	na	na	na	na	900	na	0	na	na	na
1948	na	na	na	na	na	1486	na	0	na	na	na
1947	na	na	na	na	na	1650	na	0	na	na	na
1946	na	na	na	na	na	1480	na	0	na	na	na

Note: (*) MA = Machine; CM = Continuous miner; LW = Longwall. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Lee County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	Hand	MA+	CM+	Man Day	Ton
1988	24	345	180	22214	123	1204	0	17	1187	19.39	6.37
1987	25	422	182	19201	105	1400	0	239	1161	18.23	5.79
1986	27	483	130	14209	110	991	0	172	819	15.78	6.93
1985	23	389	na	10197	na	972	0	134	839	na	7.28
1984	22	375	na	21245	na	1225	<1	297	928	na	6.50
1983	24	283	127	23375	184	1037	<1	185	853	28.86	6.38
1982	26	254	117	22997	197	811	1	234	586	27.28	7.21
1981	17	204	178	21303	120	567	0	207	359	15.61	7.67
1980	24	169	117	18459	158	464	3	135	325	23.46	6.73
1979	14	122	162	17441	108	369	0	61	308	18.68	5.76
1978	18	110	124	14797	119	302	0	74	228	22.13	5.39
1977	17	167	150	16108	107	279	<1	140	139	11.13	8.67
1976	24	187	107	13381	125	402	3	99	300	20.06	6.23
1975	17	246	167	11815	71	421	0	60	361	10.25	6.90
1974	20	220	118	10996	93	545	0	66	526	21.00	4.44
1973	14	215	183	11221	61	626	6	92	510	15.92	3.85
1972	19	204	na	10033	na	593	21	135	427	na	3.45
1971	29	188	105	8351	80	409	14	150	245	20.70	3.84
1970	36	197	na	7135	na	546	57	170	320	na	5.42
1969	30	147	na	4501	na	407	59	134	214	na	1.63
1968	45	180	na	4422	na	799	108	141	550	na	0.98
1967	59	181	na	3650	na	410	198	196	16	na	1.61
1966	79	223	na	3188	na	321	223	98	0	na	2.21
1965	97	301	na	3008	na	408	361	47	0	na	2.22
1964	115	324	na	2731	na	410	331	79	0	na	2.16
1963	118	342	na	2487	na	405	336	69	0	na	2.10
1962	122	342	na	2199	na	363	358	5	0	na	2.07
1961	121	285	na	1818	na	258	258	<1	0	na	2.01
1960	123	325	na	1876	na	270	269	1	0	na	2.26
1959	128	348	na	1804	na	242	236	6	0	na	2.42
1958	102	249	na	2012	na	194	188	7	0	na	2.58
1957	87	262	na	2158	na	185	138	47	0	na	3.06
1956	na	290	na	1928	na	215	189	26	0	na	2.60
1955	na	na	na	na	na	153	na	na	na	na	na
1954	na	na	na	na	na	146	na	na	na	na	na
1953	na	na	na	na	na	191	na	na	na	na	na
1952	na	na	na	na	na	208	na	na	na	na	na
1951	na	na	na	na	na	148	na	na	na	na	na
1950	na	na	na	na	na	192	na	na	na	na	na
1949	na	na	na	na	na	137	na	na	na	na	na
1948	na	na	na	na	na	219	na	na	na	na	na
1947	na	na	na	na	na	291	na	na	na	na	na
1946	na	na	na	na	na	169	na	na	na	na	na

Note: (+) MA = Machine; CM = Continuous miner. No longwall production reported. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Lee County
Office Workers at Underground Mines: 1988-1956

Year	<u>Tipple Mines</u>		<u>Truck Mines</u>	
	#	\$/Year	#	\$/Year
1988	6	31366	12	9947
1987	9	36401	17	9556
1986	7	32234	9	37820
1985	6	34377	14	15700
1984	7	26980	14	13550
1983	5	27516	14	17557
1982	5	17038	10	15733
1981	7	18600	14	18917
1980	7	14873	14	16520
1979	5	11671	11	12450
1978	6	10204	11	9065
1977	8	16320	15	8680
1976	8	22144	17	19116
1975	3	10000	15	22466
1974	4	39722	12	16957
1973	2	2250	9	9050
1972	16	3000	30	10192
1971	0	0	8	11944
1970	0	0	4	3030
1969	0	0	2	4000
1968	1	3229	3	2850
1967	3	3283	2	1983
1966	1	1350	2	7598
1965	3	4733	6	441
1964	2	6150	4	1154
1963	1	4800	9	1790
1962	3	5063	4	1070
1961	5	4671	4	1093
1960	5	5186	6	97
1959	10	3593	11	1797
1958	96	3913	261	1694
1957	8	4632	6	1377
1956	10	4555	6	1512

Source: *Virginia Division of Mines Annual Reports, 1956-1988.*

Southwest Virginia Coalfield — Lee County
Production, Productivity, Price & Distribution: 1975-1936
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	64	467	1048	122	18.39	28.14	na	na	na	na
1974	44	360	952	115	23.34	25.08	na	na	na	na
1973	28	349	1136	212	15.35	15.81	na	na	na	na
1972	47	306	1036	na	na	7.33	na	na	na	na
1971	43	266	875	92	35.90	9.19	758	117	na	na
1970	52	303	1127	211	17.68	6.12	976	149	na	na
1969	47	471	883	177	17.11	4.19	na	na	na	na
1968	53	253	1227	na	na	3.89	844	383	na	na
1967	53	261	835	na	na	na	na	na	na	na
1966	53	337	433	168	7.68	4.65	253	80	na	na
1965	68	438	499	180	6.35	4.32	378	121	na	na
1964	70	454	471	178	5.84	3.88	413	58	<1	na
1963	81	485	502	175	5.93	4.11	430	72	<1	na
1962	87	445	453	146	6.99	3.68	280	172	76	na
1961	70	404	453	152	7.38	3.59	296	157	<1	na
1960	63	440	616	177	7.89	3.67	380	259	3	<1
1959	68	727	451	117	5.31	3.72	323	127	23	<1
1958	61	374	364	178	5.51	5.66	311	52	14	1
1957	36	776	550	153	4.64	6.14	222	162	9	na
1956	47	814	762	172	5.44	6.09	458	175	34	8
1955	na	761	660	163	5.32	5.74	580	78	na	3
1954	na	630	591	169	5.54	5.30	479	107	na	5
1953	na	923	723	160	4.88	6.19	568	148	na	6
1952	na	961	745	181	4.29	6.14	601	78	na	6
1951	na	na	751	na	na	na	na	na	na	na
1950	na	1145	785	180	3.81	6.56	693	85	na	7
1949	na	1211	619	149	3.42	6.56	518	93	na	8
1948	na	1191	950	208	3.83	6.56	869	71	na	11
1947	na	860	770	227	3.95	4.84	703	58	na	9
1946	na	733	599	197	4.14	4.01	512	80	na	7
1945	na	851	876	258	3.98	3.46	803	60	12	1
1944	na	1002	931	251	3.70	3.39	859	61	11	1
1943	na	1382	1347	266	3.66	3.11	1270	61	14	2
1942	na	1677	1559	248	3.75	2.71	1447	96	14	2
1941	na	1981	1505	220	3.45	2.49	1408	84	12	2
1940	na	1879	1421	215	4.52	2.15	1328	79	13	1
1939	na	na	1196	na	na	na	na	na	na	na
1938	na	1715	988	163	3.54	na	944	33	11	<1
1937	na	1937	1286	198	3.36	na	1242	30	11	1
1936	na	1965	1343	199	3.43	na	1305	24	12	1

Note: Figures rounded — may not add.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1936-1975.

Southwest Virginia Coalfield — Lee County
Production, Productivity, Price & Distribution: 1935-1907
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1935	na	1717	1147	194	3.41	1.92	1117	17	13	na
1934	na	1762	1123	190	3.36	1.79	1096	11	16	1
1933	na	1650	1220	180	4.11	1.31	1192	16	10	1
1932	na	1987	1543	149	5.21	1.15	1526	na	4	1
1931	na	2122	1879	182	4.91	1.38	1873	na	22	2
1930	na	2131	1739	180	4.53	1.60	1724	na	10	5
1929	na	2073	2143	251	4.12	1.69	2122	na	18	4
1928	na	1964	2200	252	4.45	1.70	2179	na	19	2
1927	17	2056	2181	238	4.45	1.79	2170	na	9	2
1926	na	1712	1971	240	4.79	1.96	1954	na	16	2
1925	na	1672	1514	290	4.18	1.78	1501	na	12	1
1924	na	1569	1140	201	3.61	1.89	1126	na	11	3
1923	na	1574	1025	188	3.46	2.66	1007	na	10	8
1922	na	1290	762	152	3.89	2.68	753	na	6	3
1921	na	1391	688	159	3.11	2.80	677	na	8	3
1920	na	1477	946	208	3.08	4.27	923	na	12	11
1919	na	1173	679	204	2.84	2.68	672	na	4	3
1918	na	1254	888	267	2.65	2.81	874	na	10	5
1917	na	1189	872	254	2.89	2.43	855	na	6	10
1916	na	965	828	255	3.36	1.14	814	na	5	10
1915	na	953	742	248	3.14	1.05	720	na	6	16
1914	na	1005	733	251	2.91	1.09	708	<u>To Coke</u>	7	18
1913	na	1023	763	263	2.80	1.15	705	30	8	21
1912	na	1081	751	269	2.58	1.16	719	12	5	16
1911	na	776	721	250	3.71	1.01	668	26	6	22
1910	na	946	797	254	3.32	0.90	644	141	4	8
1909	na	650	449	na	na	0.90	331	109	3	6
1908	na	621	464	234	3.20	0.93	348	94	13	9
1907	na	432	199	199	2.31	1.15	180	na	18	1

Note: Figures rounded — may not add.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1907-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1935.

Southwest Virginia Coalfield — Russell County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	<1	80	0	280	361	0	85	275	0
1987	1	52	114	317	484	0	53	431	0
1986	0	131	281	469	880	0	296	584	0
1985	0	96	328	578	1002	0	332	670	0
1984	115	56	378	635	1184	0	566	378	0
1983	147	123	372	808	1449	1	1049	400	0
1982	113	209	580	446	1348	<1	762	586	0
1981	7	395	746	493	1630	23	852	746	0
1980	7	232	912	326	1477	<1	559	918	0
1979	2	253	699	302	1256	<1	557	699	0
1978	45	491	508	181	1226	2	716	469	38
1977	15	601	843	107	1566	na	711	670	185
1976	17	422	1213	56	1708	3	492	991	222
1975	9	677	1256	55	1997	<1	741	980	276
1974	45	451	1267	45	1823	11	546	1118	149
1973	172	627	1567	26	2392	20	1092	1119	161
1972	110	788	1694	110	2636	39	1295	1302	0
1971	77	636	1646	68	2426	26	1977	423	0
1970	2	266	1937	108	2311	88	771	1453	0
1969	8	16	2210	174	2409	119	997	1292	0
1968	27	30	2037	286	2380	118	912	1290	0
1967	26	52	1929	272	2280	157	798	1325	0
1966	31	38	1453	398	1920	356	1564	0	0
1965	0	2	1280	456	1738	313	1425	0	0
1964	41	3	1412	452	1908	304	1604	0	0
1963	17	23	1399	469	1909	489	1419	0	0
1962	48	108	1442	432	2030	471	1558	0	0
1961	39	76	1507	320	1942	334	1607	0	0
1960	72	91	1750	383	2294	444	1851	0	0
1959	241	145	1929	259	2575	327	2248	0	0
1958	136	230	2075	241	2682	334	2348	0	0
1957	105	152	1995	511	2762	570	2193	0	0
1956	64	164	1031	187	1445	505	940	0	0
1955	31	0	800	187	1018	na	na	0	0
1954	0	6	511	184	701	na	na	0	0
1953	0	13	665	244	922	na	na	0	0
1952	0	8	734	157	900	na	na	0	0
1951	0	39	731	159	929	na	na	0	0
1950	0	155	677	238	1070	na	na	0	0
1949	0	132	688	358	1179	na	na	0	0
1948	0	286	1070	216	1572	na	na	0	0
1947	0	249	1441	412	2101	na	na	0	0
1946	0	89	1030	175	1293	na	na	0	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Russell County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	14	153	142	15105	106	16.60	6.41	13	27859
1987	13	146	184	21414	117	18.00	6.42	12	12862
1986	14	230	207	24233	117	18.49	6.33	10	10670
1985	27	325	na	21119	na	na	6.85	17	5891
1984	38	403	na	18376	na	na	6.26	32	11732
1983	29	360	141	24637	175	22.64	6.12	24	15576
1982	42	491	118	24699	209	23.27	9.00	34	18943
1981	44	605	123	24906	202	21.90	9.30	37	16573
1980	42	596	110	22309	200	22.53	8.89	42	18664
1979	38	662	113	17776	157	16.79	9.37	35	17478
1978	43	648	106	17387	164	17.84	9.19	35	16011
1977	49	975	99	12242	124	16.23	7.62	40	9903
1976	35	896	107	14537	136	17.81	7.63	34	8656
1975	46	886	120	14895	124	18.79	6.61	32	9204
1974	32	692	112	13606	121	23.53	5.16	28	5509
1973	33	696	106	12565	119	32.42	3.66	21	5093
1972	29	762	na	10577	na	na	3.06	24	4285
1971	31	748	120	10722	89	27.02	3.31	22	4093
1970	25	816	238	8196	34	11.90	2.89	16	5184
1969	26	735	241	8620	36	13.60	2.63	13	6179
1968	34	711	na	7286	na	na	2.18	8	3482
1967	40	706	na	6516	na	na	2.02	21	6227
1966	51	587	202	6208	31	16.19	1.90	14	7121
1965	55	556	217	5090	23	14.41	1.63	45	5841
1964	59	619	241	5298	22	12.79	1.72	50	8050
1963	60	717	231	5037	22	11.52	1.89	56	7302
1962	59	732	219	4866	22	12.66	1.75	65	6354
1961	55	831	193	4394	23	12.10	1.88	68	7144
1960	70	986	229	4416	19	10.16	1.90	74	7176
1959	93	929	196	4666	24	14.14	1.68	75	7036
1958	80	1242	213	3934	18	10.14	1.82	99	7857
1957	95	1354	227	4845	21	8.99	2.37	44	6715
1956	45	871	223	3116	14	7.44	1.88	29	4535
1955	na	719	184	na	na	7.69	na	na	na
1954	na	528	166	na	na	8.00	na	na	na
1953	na	748	151	na	na	8.16	na	na	na
1952	na	796	184	na	na	6.15	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	1089	170	na	na	5.78	na	na	na
1949	na	1351	153	na	na	5.70	na	na	na
1948	na	1213	221	na	na	5.86	na	na	na
1947	na	1172	265	na	na	6.77	na	na	na
1946	na	942	222	na	na	6.19	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Russell County
Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons	Wage(\$)	Office Workers	
				\$/Year	\$/Day		Man Day	Ton	#	\$/Year
1988	1	2	5	489	98	<1	24.50	3.99	0	0
1987	1	2	10	1600	160	1	32.00	5.00	0	0
1986	0	0	0	0	0	0	0	0	0	0
1985	2	0	0	0	0	0	0	0	0	0
1984	2	25	na	18698	na	115	na	4.07	2	7214
1983	3	19	84	17639	210	147	92.19	2.28	3	7588
1982	3	17	56	27495	491	113	118.65	4.14	2	7527
1981	2	1	28	35580	1270	7	241.36	5.26	1	200
1980	3	3	41	12808	312	7	56.63	5.52	0	0
1979	2	2	4	2867	717	2	219.38	3.27	1	90
1978	0	—	na	na	na	45	na	na	na	na
1977	4	4	19	5433	286	15	191.13	1.50	na	na
1976	3	12	24	3219	134	17	60.23	2.23	3	2827
1975	4	4	48	4273	89	9	47.43	1.88	1	1632
1974	3	8	110	5738	52	45	50.65	1.03	2	139
1973	9	17	71	2589	36	172	142.49	1.07	4	1554
1972	9	16	na	7992	na	110	na	1.16	4	420
1971	6	8	77	5147	67	77	9.63	0.54	1	150
1970	1	1	na	841	na	2	na	0.50	0	0
1969	1	1	na	5444	na	8	na	0.65	0	0
1968	3	8	na	4430	na	27	na	1.30	0	0
1967	2	13	na	1399	na	26	na	0.70	0	0
1966	2	5	na	3281	na	31	na	0.53	0	0
1965	0	0	0	0	0	0	0	0	0	0
1964	1	5	na	5157	na	41	na	0.63	1	2300
1963	3	12	na	1872	na	17	na	1.29	0	0
1962	4	11	na	3995	na	48	na	0.91	4	2500
1961	2	8	na	3401	na	39	na	0.71	2	4000
1960	4	31	na	1486	na	72	na	0.64	0	0
1959	na	na	na	na	na	241	na	na	0	0
1958	7	44	na	2046	na	136	na	0.66	4	2818
1957	4	15	na	4940	na	105	na	0.71	0	0
1956	na	12	na	4253	na	64	na	0.80	1	240
1955	na	na	na	na	na	31	na	na	na	na
1954	na	na	na	na	na	na	na	na	na	na
1953	na	na	na	na	na	na	na	na	na	na

Note: No auger mines reported prior to 1953.

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Southwest Virginia Coalfield — Russell County
Strip Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	5	37	167	10294	62	80	12.96	4.76	6	15321
1987	2	21	248	17612	71	52	9.99	7.11	7	22049
1986	3	30	240	26457	111	131	18.14	6.11	5	9021
1985	4	31	na	25455	na	96	na	8.22	4	10333
1984	8	43	na	9312	na	56	na	7.18	11	9418
1983	7	35	113	8943	79	123	31.06	2.55	7	16827
1982	13	67	109	21277	195	209	28.68	6.80	10	8337
1981	14	97	99	22623	229	395	41.13	5.56	15	19546
1980	13	87	84	18902	225	232	31.74	7.09	12	19989
1979	11	104	120	15108	126	253	20.27	6.21	15	23268
1978	17	131	106	15641	148	491	35.38	4.17	19	15596
1977	22	159	108	12265	114	601	35.02	3.24	24	8827
1976	21	113	102	10853	106	422	36.61	2.91	19	7872
1975	30	163	115	11505	100	677	43.31	2.77	19	8366
1974	19	74	77	8883	115	451	79.23	1.46	15	2567
1973	15	107	110	8552	78	627	53.28	1.46	10	3774
1972	11	96	na	9321	na	788	na	1.14	10	3611
1971	14	95	77	7405	76	636	68.28	1.11	11	2387
1970	9	55	na	5930	na	266	na	1.22	4	2472
1969	1	6	na	6588	na	16	na	2.52	0	0
1968	4	9	na	4604	na	30	na	1.40	0	0
1967	4	21	na	2087	na	52	na	0.84	0	0
1966	5	8	na	5079	na	38	na	1.07	0	0
1965	2	2	na	2243	na	2	na	1.80	0	0
1964	2	3	na	2507	na	3	na	2.52	0	0
1963	4	11	na	3808	na	23	na	1.82	3	2867
1962	6	32	na	4269	na	108	na	1.27	4	5000
1961	4	20	na	4324	0	76	0	1.13	3	5733
1960	5	34	na	3283	na	91	na	1.23	6	2570
1959	4	14	na	5656	na	145	na	0.55	1	5216
1958	3	58	na	5296	na	230	na	1.33	7	6435
1957	3	38	na	6279	na	152	na	1.61	1	4800
1956	3	33	na	2640	na	164	na	0.53	2	1450
1955	0	0	0	0	0	0	0	0	0	0
1954	1	2	na	na	na	6	na	na	na	na
1953	1	4	na	na	na	13	na	na	na	na
1952	1	3	na	na	na	8	na	na	na	na
1951	2	6	na	na	na	39	na	na	na	na
1950	1	21	na	na	na	155	na	na	na	na
1949	2	34	na	na	na	132	na	na	na	na
1948	5	61	na	na	na	286	na	na	na	na
1947	4	51	na	na	na	249	na	na	na	na
1946	2	37	na	na	na	89	na	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Russell County
Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	0	0	0	0	0	0	0	0	0	0	0
1987	2	42	150	24674	164	114	0	114	0	18.13	9.07
1986	2	80	248	32104	129	281	0	281	0	14.15	9.14
1985	2	87	na	33329	na	328	0	328	0	na	8.85
1984	2	110	na	30389	na	378	0	378	0	na	8.84
1983	2	115	239	31723	133	372	0	372	0	13.52	9.82
1982	4	250	155	27426	177	580	0	580	0	14.97	11.82
1981	4	347	213	28670	135	746	0	746	0	10.09	13.34
1980	4	372	250	24094	96	912	0	912	0	9.81	9.82
1979	4	431	218	19415	89	699	0	699	0	7.44	11.97
1978	4	424	135	19400	144	508	0	469	38	8.87	16.20
1977	4	737	199	12780	64	843	0	658	185	5.75	11.17
1976	4	736	230	15568	68	1213	0	991	222	7.16	9.45
1975	4	678	228	16251	71	1256	0	980	276	8.13	8.77
1974	5	573	168	14863	88	1267	0	1118	149	13.16	6.72
1973	3	551	253	13692	54	1567	287	1119	161	11.24	4.81
1972	3	616	na	11102	na	1694	392	1302	0	na	4.04
1971	3	596	212	11790	56	1646	1223	423	0	13.02	4.27
1970	3	684	na	8765	na	1937	484	1453	Hand	na	3.10
1969	3	620	na	9499	na	2210	917	1293	0	na	2.66
1968	4	557	na	8208	na	2037	747	1290	0	na	2.24
1967	4	523	na	7574	na	1929	604	1325	0	na	2.05
1966	4	387	na	7455	na	1453	1392	0	61	na	1.99
1965	2	320	na	6322	na	1280	1280	0	0	na	1.58
1964	2	378	na	6350	na	1412	1412	0	0	na	1.70
1963	2	408	na	6191	na	1399	1312	0	87	na	1.81
1962	2	432	na	5806	na	1442	1363	0	79	na	1.74
1961	2	538	na	5133	na	1507	1417	0	91	na	1.83
1960	2	596	na	5609	na	1750	1639	0	110	na	1.91
1959	7	677	na	5426	na	1929	1815	0	114	na	1.90
1958	8	820	na	4767	na	2075	1938	0	137	na	1.88
1957	5	902	na	5794	na	1995	1860	0	135	na	2.62
1956	na	670	na	3302	na	1031	710	0	321	na	2.15
1955	na	na	na	na	na	800	na	0	na	na	na
1954	na	na	na	na	na	511	na	0	na	na	na
1953	na	na	na	na	na	665	na	0	na	na	na
1952	na	na	na	na	na	734	na	0	na	na	na
1951	na	na	na	na	na	731	na	0	na	na	na
1950	na	na	na	na	na	677	na	0	na	na	na
1949	na	na	na	na	na	688	na	0	na	na	na
1948	na	na	na	na	na	1070	na	0	na	na	na
1947	na	na	na	na	na	1441	na	0	na	na	na
1946	na	na	na	na	na	1030	na	0	na	na	na

Note: (*) MA = Machine; CM = Continuous miner; LW = Longwall. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Russell County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Production			Tons Man Day	Wage(\$) Ton
				\$/Year	\$/Day		Hand	MA+	CM+		
1988	8	114	136	16923	124	280	0	5	275	18.08	6.88
1987	8	80	189	21196	112	317	0	0	317	20.94	5.36
1986	9	120	171	18407	107	469	0	166	303	22.84	4.71
1985	19	207	na	15339	na	578	0	236	342	na	5.49
1984	26	225	na	14199	na	635	68	566	0	na	5.03
1983	17	191	151	23942	159	808	1	779	28	28.00	5.66
1982	22	157	125	21515	172	446	<1	440	6	22.70	7.58
1981	24	160	130	18061	139	493	23	450	0	23.70	6.11
1980	22	134	110	18576	169	326	<1	320	5	22.08	7.64
1979	21	125	99	14582	147	302	<1	302	0	24.41	6.03
1978	22	93	100	10671	107	181	2	180	0	19.50	5.47
1977	19	75	83	7270	88	107	0	95	12	17.24	5.08
1976	7	35	87	8650	99	56	3	53	0	18.39	5.41
1975	8	41	118	6982	59	55	<1	54	0	11.33	5.22
1974	5	37	189	5274	28	60	11	50	0	6.37	3.23
1973	6	21	76	4851	64	26	20	6	0	16.40	3.89
1972	6	34	na	5813	na	45	39	6	0	na	4.42
1971	8	49	159	5073	56	68	26	42	0	8.69	3.67
1970	12	76	na	4812	na	108	88	20	0	na	3.40
1969	21	108	na	3721	na	174	119	55	0	na	2.30
1968	23	137	na	3878	na	286	178	108	0	na	1.86
1967	30	148	na	3898	na	272	157	116	0	na	2.12
1966	40	187	na	3752	na	398	295	103	0	na	1.76
1965	51	234	na	3429	na	456	313	143	0	na	1.76
1964	54	233	na	3631	na	452	304	148	0	na	1.87
1963	51	286	na	3571	na	469	402	67	0	na	2.18
1962	47	257	na	3396	na	432	392	40	0	na	2.02
1961	47	265	na	2927	na	320	244	76	0	na	2.42
1960	59	325	na	2628	na	383	333	49	0	na	2.17
1959	82	238	na	2448	na	259	213	47	0	na	2.25
1958	62	319	na	1817	na	241	198	44	0	na	2.40
1957	83	399	na	2544	na	511	435	76	0	na	1.99
1956	na	156	na	2330	na	187	184	3	0	na	1.94
1955	na	na	na	na	na	187	na	na	na	na	na
1954	na	na	na	na	na	184	na	na	na	na	na
1953	na	na	na	na	na	244	na	na	na	na	na
1952	na	na	na	na	na	157	na	na	na	na	na
1951	na	na	na	na	na	159	na	na	na	na	na
1950	na	na	na	na	na	238	na	na	na	na	na
1949	na	na	na	na	na	358	na	na	na	na	na
1948	na	na	na	na	na	216	na	na	na	na	na
1947	na	na	na	na	na	412	na	na	na	na	na
1946	na	na	na	na	na	175	na	na	na	na	na

Note: (+) MA = Machine; CM = Continuous miner. No longwall production reported. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

**Southwest Virginia Coalfield — Russell County
Office Workers at Underground Mines: 1988-1956**

Year	Tipple Mines		Truck Mines	
	#	\$/Year	#	\$/Year
1988	0	0	7	38595
1987	1	0	4	0
1986	1	18901	4	10676
1985	1	21046	12	3148
1984	3	37952	16	8970
1983	3	40424	11	10181
1982	8	35916	14	18332
1981	6	30333	15	9188
1980	13	24231	17	13471
1979	12	16625	7	9018
1978	12	15500	4	19513
1977	13	12923	3	5425
1976	11	12273	1	1250
1975	11	12164	1	120
1974	11	10497	0	0
1973	7	9000	0	0
1972	7	9000	3	683
1971	7	8714	3	883
1970	9	7611	3	1516
1969	10	7728	3	1016
1968	3	7500	5	1071
1967	18	7055	3	1259
1966	13	7034	1	8065
1965	39	6563	6	1154
1964	41	9472	8	1484
1963	44	8831	3	1305
1962	47	7937	10	997
1961	56	8067	3	1262
1960	60	8395	8	1481
1959	67	7685	7	1081
1958	84	8480	4	2307
1957	28	9936	15	829
1956	18	6726	8	912

Source: *Virginia Division of Mines Annual Reports, 1956-1988.*

Southwest Virginia Coalfield — Russell County
Production, Productivity, Price & Distribution: 1975-1936
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	30	886	1997	120	18.79	34.36	1868	217	na	na
1974	15	692	1822	112	23.51	26.23	1633	189	na	na
1973	29	881	2485	237	11.90	12.19	na	na	na	na
1972	26	762	2712	na	na	9.98	na	na	na	na
1971	24	748	2529	120	28.18	9.19	2424	105	na	na
1970	17	784	2333	238	12.97	8.41	2276	58	na	na
1969	21	552	2026	241	15.26	6.34	1931	95	na	na
1968	26	711	2010	na	na	5.12	1879	131	na	na
1967	32	706	2280	na	na	na	na	na	na	na
1966	40	648	1917	202	14.61	5.41	1651	266	na	na
1965	42	585	1736	217	13.68	5.21	1565	172	na	na
1964	40	529	1900	241	14.88	3.85	1554	346	na	na
1963	40	652	1904	231	12.64	4.63	1547	357	na	na
1962	48	749	2024	219	12.31	4.68	1733	291	na	na
1961	34	818	1935	193	12.23	4.73	1758	172	na	5
1960	32	924	2284	229	10.82	4.86	1952	332	na	na
1959	58	1042	2564	196	12.56	5.10	2173	391	na	na
1958	52	1178	2672	213	10.66	4.93	2431	241	na	na
1957	68	1128	2745	227	10.72	5.21	2471	161	na	113
1956	45	869	1471	223	7.59	4.53	1276	183	na	12
1955	na	719	1014	184	7.66	4.65	745	269	na	na
1954	na	528	690	166	7.86	4.52	572	109	na	10
1953	na	748	920	151	8.16	5.10	716	203	na	1
1952	na	796	892	184	6.10	5.30	na	na	na	na
1951	na	na	929	na	na	na	na	na	na	na
1950	na	1089	1099	170	5.94	5.58	954	145	na	<1
1949	na	1351	1160	153	5.60	5.60	1047	112	na	1
1948	na	1213	1499	221	5.60	6.13	1417	83	na	1
1947	na	1172	2002	265	6.45	5.01	1935	65	na	1
1946	na	942	1187	222	5.68	3.66	1076	99	10	1
1945	na	966	1041	265	4.06	3.35	966	63	11	1
1944	na	1077	1216	295	3.83	3.09	1120	83	12	1
1943	na	1061	1268	294	4.06	2.79	1171	85	12	1
1942	na	1136	1147	249	4.05	2.51	1056	79	10	2
1941	na	1319	1176+	231	3.93	2.29	1096	87	9	5
1940	na	854	606	154	4.61	2.00	540	57	6	3
1939	na	na	651*	na	na	na	na	na	na	na
1938	na	1016	510*	140	3.57	na	431	69	5	4
1937	na	1035	649*	160	3.92	na	577	64	10	1
1936	na	1025	642*	157	3.98	na	606	25	10	1

Note: Figures rounded — may not add. (+) includes Montgomery County. (*) includes Scott County.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1936-1975.

Southwest Virginia Coalfield — Russell County
Production, Productivity, Price & Distribution: 1935-1900
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1935	na	983	660	169	3.97	1.73	644	7	9	1
1934	na	1001	772	179	4.31	1.59	753	8	10	1
1933	na	1133	753	147	4.53	1.07	733	6	13	<1
1932	na	1062	674	124	5.12	1.04	654	3	13	4
1931	na	1194	1009	169	5.00	1.44	987	17	4	na
1930	na	1456	1255	170	5.06	1.33	1234	na	16	4
1929	na	1288	1415	220	4.99	1.40	1395	na	14	6
1928	na	1401	2410	193	4.66	1.88	1240	na	17	3
1927	17	1351	1519	225	4.99	1.62	1499	na	17	3
1926	na	1755	1864	268	3.97	1.77	1837	na	25	3
1925	na	2085	1255	256	3.48	1.75	1820	na	32	2
1924	na	1832	1602	216	4.04	2.01	1570	na	28	5
1923	na	2180	2066	205	4.62	2.61	2024	na	33	8
1922	na	2289	2071	209	4.33	2.51	2025	na	37	8
1921	na	1954	1544	171	4.62	3.00	1515	na	22	7
1920	na	2189	2123	253	3.83	3.65	2078	na	38	7
1919	na	2044	1802	227	3.88	2.44	1763	na	32	6
1918	na	2252	1998	289	3.07	2.51	1973	na	14	11
1917	na	2108	2001	280	3.39	1.82	1957	na	16	27
1916	na	1965	1950	290	3.42	0.98	1908	na	42	1
1915	na	1526	1493	243	4.02	0.90	1456	na	15	22
1914	na	1515	1236	244	3.34	1.03	1198	na	13	24
1913*	na	1746	1513	296	2.93	1.04	1467	na	18	29
1912*	na	1779	1293	252	2.88	0.95	1243	na	11	39
1911*	na	1682	1108	279	2.36	0.92	1065	na	11	32
1910*	na	678	793	180	6.50	0.84	757	na	13	23
1909**	na	na	486	na	na	0.96	459	na	12	15
1908**	na	586	256	280	1.56	1.03	240	na	6	11
1907**	na	812	250	232	1.33	1.09	234	na	8	8
1906***	na	651	303	210	2.22	1.11	281	na	11	12
1905***	na	655	323	226	2.18	1.08	304	na	12	7
1904****	na	381	158	184	2.25	0.84	155	na	1	2
1903*****	na	na	9	na	na	na	na	na	na	na
1902*****	na	na	8	na	na	na	na	na	na	na
1901*****	na	na	8	na	na	na	na	na	na	na
1900*****	na	na	9	na	na	na	na	na	na	na

Note: Figures rounded — may not add. (*) Includes Pulaski, Montgomery, and Henrico counties. (**) Includes Lee, Montgomery, and Pulaski counties. (***) Includes Pulaski and Chesterfield counties. (****) Includes Pulaski County.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1900-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1935.

Southwest Virginia Coalfield — Scott County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	0	0	0	122	122	0	0	122	0
1987	0	0	0	115	115	0	0	115	0
1986	0	3	0	121	124	0	3	121	0
1985	0	6	0	100	105	0	6	99	0
1984	0	4	0	15	19	0	7	12	0
1983	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0
1981	0	0	0	11	11	0	11	0	0
1980	0	0	0	11	11	0	11	0	0
1979	0	0	0	24	24	0	24	0	0
1978	0	0	0	20	20	0	20	0	0
1977	0	0	0	0	0	0	0	0	0
1976	0	9	0	4	13	3	10	0	0
1975	0	0	0	8	8	<1	3	5	0
1974	0	0	0	8	8	2	0	6	0
1973	0	2	0	7	9	7	2	0	0
1972	0	0	0	11	11	11	11	0	0
1971	0	<1	0	16	17	1	16	0	0
1970	0	2	0	9	11	9	2	0	0
1969	0	0	0	1	1	1	0	0	0
1968	0	0	0	9	9	9	0	0	0
1967	0	0	0	15	15	15	0	0	0
1966	0	0	0	11	11	11	0	0	0
1965	0	0	0	7	7	7	0	0	0
1964	0	0	0	5	5	5	0	0	0
1963	0	2	0	6	8	6	2	0	0
1962	0	0	0	4	4	4	0	0	0
1961	0	0	0	19	19	19	0	0	0
1960	0	0	0	17	17	17	0	0	0
1959	0	>1	0	16	17	6	10	0	0
1958	0	0	0	5	5	5	0	0	0
1957	0	0	0	17	17	17	0	0	0
1956	0	0	0	12	12	12	0	0	0
1955	0	2	0	13	15	13	2	0	0
1954	0	2	0	15	17	15	2	0	0
1953	0	0	0	28	28	28	0	0	0
1952	0	0	0	32	32	32	0	0	0
1951	0	0	0	38	38	38	0	0	0
1950	0	0	0	52	52	52	0	0	0
1949	0	0	0	55	55	55	0	0	0
1948	0	2	0	96	98	96	2	0	0
1947	0	0	0	112	112	112	0	0	0
1946	0	2	0	57	59	57	2	0	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Scott County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	1	30	230	21595	94	17.67	5.31	0	0
1987	3	50	127	15461	122	18.13	6.71	0	0
1986	5	43	214	19647	92	13.46	6.82	1	0
1985	7	44	na	13277	na	na	5.81	2	3040
1984	6	25	na	8002	na	na	10.44	1	4800
1983	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0
1981	1	9	135	8311	62	8.73	7.05	1	4500
1980	1	11	240	16861	70	4.00	17.58	1	3000
1979	1	12	258	19378	75	7.80	9.63	1	6581
1978	1	11	234	16427	64	7.65	10.02	1	4425
1977	0	0	0	0	0	0	0	0	0
1976	2	8	143	9949	70	11.08	6.27	2	1800
1975	3	15	39	9470	243	13.24	18.34	2	3350
1974	2	8	58	6594	114	17.39	6.54	1	2700
1973	3	10	101	2566	25	8.59	2.96	1	900
1972	2	12	na	3097	na	na	3.34	1	2687
1971	4	22	105	2801	27	6.95	3.65	1	0
1970	2	9	191	3611	19	6.46	2.92	0	0
1969	2	3	na	1441	na	na	3.80	0	0
1968	1	9	na	278	na	na	2.86	1	0
1967	1	11	na	3235	na	na	2.42	1	3600
1966	3	12	239	2445	10	3.89	2.63	0	0
1965	6	10	103	2232	22	6.65	3.26	1	1576
1964	7	7	75	1718	23	9.39	2.44	0	0
1963	12	21	88	1068	12	4.31	2.81	1	1224
1962	7	10	138	1243	9	3.19	2.83	0	0
1961	10	21	131	2299	18	6.85	2.56	1	3422
1960	8	29	193	1719	9	3.04	2.93	1	3100
1959	15	31	207	1644	8	2.68	3.08	0	0
1958	13	14	294	1199	4	1.25	3.26	0	0
1957	11	41	209	2063	10	2.02	2.98	1	500
1956	6	23	166	1493	9	3.27	2.75	1	350
1955	na	26	158	na	na	3.69	na	na	na
1954	na	51	142	na	na	2.35	na	na	na
1953	na	35	200	na	na	3.95	na	na	na
1952	na	41	200	na	na	3.92	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	25	185	na	na	11.27	na	na	na
1949	na	35	184	na	na	8.56	na	na	na
1948	na	48	257	na	na	7.91	na	na	na
1947	na	99	260	na	na	4.36	na	na	na
1946	na	55	240	na	na	4.47	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Scott County
Strip Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0
1986	2	4	40	4250	106	3	18.75	5.57	0	0
1985	4	8	na	10875	na	6	na	15.48	1	304
1984	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0
1976	1	5	240	12610	52	9	7.35	7.14	1	1200
1975	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0
1973	1	1	30	900	30	2	60.00	0.50	0	0
1972	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0
1970	1	1	na	4500	na	2	na	2.50	0	0
1969	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1963	1	1	na	3668	na	2	na	2.35	0	0
1962	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0
1959	1	1	na	650	na	<1	na	3.25	0	0
1958	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0
1955	na	na	na	na	na	2	na	na	na	na
1954	na	na	na	na	na	2	na	na	na	na
1953	na	na	na	na	na	0	na	na	na	na
1952	na	na	na	na	na	0	na	na	na	na
1951	na	na	na	na	na	0	na	na	na	na
1950	na	na	na	na	na	0	na	na	na	na
1949	na	na	na	na	na	0	na	na	na	na
1948	na	na	na	na	na	1	na	na	na	na
1947	na	na	na	na	na	0	na	na	na	na
1946	na	na	na	na	na	2	na	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Scott County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	Hand	MA+	CM+	Man Day	Ton
1988	1	30	230	21595	94	122	0	0	122	17.67	5.31
1987	3	50	127	15461	122	115	0	0	115	18.13	6.71
1986	2	39	232	21226	91	121	0	0	121	13.35	6.85
1985	3	36	na	14548	na	100	0	1	99	na	5.26
1984	4	25	na	8002	na	15	0	3	12	na	10.44
1983	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0
1981	1	9	135	8311	62	11	0	11	0	8.73	7.05
1980	1	11	240	16861	70	11	0	11	0	4.00	17.58
1979	1	12	258	19378	75	24	0	24	0	7.80	9.63
1978	1	11	234	16427	64	20	0	20	0	7.65	10.02
1977	0	0	0	0	0	0	0	0	0	0	0
1976	1	3	46	5513	120	4	0	4	0	27.97	4.28
1975	3	15	39	9470	243	8	<1	3	5	13.24	18.34
1974	2	8	58	6594	114	8	2	0	6	17.39	6.54
1973	2	9	136	2752	20	7	7	0	0	5.62	3.60
1972	2	12	na	3097	na	11	11	0	0	na	3.34
1971	4	22	105	2801	na	16	1	15	0	6.95	3.65
1970	1	8	na	3500	na	9	9	0	0	na	3.01
1969	2	3	na	1441	na	1	1	0	0	na	3.80
1968	1	9	na	278	na	9	9	0	0	na	2.86
1967	1	11	na	3235	na	15	15	0	0	na	2.42
1966	3	12	239	2445	na	11	11	0	0	3.89	2.63
1965	6	10	103	2232	na	7	7	0	0	6.65	3.26
1964	7	7	75	1718	na	5	5	0	0	9.39	2.44
1963	11	20	88	938	na	6	6	0	0	4.31	2.93
1962	7	10	138	1243	na	4	4	0	0	3.19	2.83
1961	10	21	131	2299	na	19	19	0	0	6.85	2.56
1960	7	26	193	1719	na	17	17	0	0	3.04	2.93
1959	3	30	na	1677	na	16	6	10	0	na	3.07
1958	13	14	294	1199	na	5	5	0	0	1.25	3.07
1957	8	41	209	2063	na	17	17	0	0	2.02	3.26
1956	5	23	166	1493	na	12	12	0	0	3.27	2.98
1955	na	na	na	na	na	13	13	0	0	na	2.75
1954	na	na	na	na	na	15	15	0	0	na	na
1953	na	35	200	na	na	28	28	0	0	3.95	na
1952	na	41	200	na	na	32	32	0	0	3.92	na
1951	na	na	na	na	na	38	38	0	0	na	na
1950	na	25	185	na	na	52	52	0	0	11.27	na
1949	na	35	184	na	na	55	55	0	0	8.56	na
1948	na	na	na	na	na	96	96	0	0	na	na
1947	na	99	260	na	na	112	112	0	0	4.36	na
1946	na	na	na	na	na	57	57	0	0	na	na

Note: (+) MA = Machine; CM = Continuous miner. No longwall production reported. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Scott County
Office Workers at Underground Coal Mines: 1988-1956

Year	<u>Truck Mines</u>	
	#	\$/Year
1988	0	0
1987	0	0
1986	1	0
1985	1	3040
1984	1	4800
1983	0	0
1982	0	0
1981	1	4500
1980	1	3000
1979	1	6581
1978	1	4425
1977	0	0
1976	1	1800
1975	1	3350
1974	1	2700
1973	1	900
1972	1	2687
1971	1	0
1970	0	0
1969	0	0
1968	1	0
1967	1	3600
1966	0	0
1965	1	1576
1964	0	0
1963	1	1224
1962	0	0
1961	1	3422
1960	1	3100
1959	0	0
1958	0	0
1957	1	500
1956	1	350

Source: *Virginia Division of Mines Annual Reports, 1956-1988.*

Southwest Virginia Coalfield — Scott County
Production, Productivity, Price & Distribution: 1975-1934
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	3	15	8	39	13.24	na	na	na	na	na
1974	2	8	8	58	17.39	26.19	na	8	na	na
1973	2	10	9	138	6.52	7.37	na	na	na	na
1972	2	12	11	na	na	8.55	na	na	na	na
1971	1	22	17	209	3.68	6.56	5	na	10	na
1970	1	9	11	191	7.17	na	na	na	na	na
1969	1	3	1	na	na	5.00	na	na	na	na
1968	1	9	9	na	na	4.82	2	9	na	na
1967	1	11	14	na	na	na	na	na	na	na
1966	1	10	11	239	4.40	4.51	3	8	na	na
1965	1	32	10	103	2.99	4.91	na	na	na	na
1964	1	19	4	75	3.00	3.91	3	na	2	na
1963	2	13	3	88	2.76	3.51	3	na	na	na
1962	3	19	12	138	4.68	4.97	8	na	4	na
1961	4	26	17	131	5.13	4.36	4	3	10	na
1960	3	14	16	193	6.00	4.31	0	16	<1	na
1959	2	11	14	207	6.00	4.55	0	4	10	na
1958	2	14	2	294	8.13	4.76	0	2	<1	na
1957	6	25	16	209	8.07	3.42	5	8	4	0
1956	6	23	7	166	4.40	4.70	0	3	4	0
1955	na	26	18	158	4.41	4.65	0	18	na	na
1954*	na	51	26	142	3.36	4.48	na	na	na	na
1953	na	35	28	200	3.95	5.33	0	28	na	na
1952	na	41	32	200	3.90	5.38	0	32	na	na
1951	na	na	38	na	na	na	na	na	na	na
1950	na	25	18	185	3.89	5.45	0	18	na	na
1949	na	35	16	184	2.41	5.52	0	16	na	na
1948	na	8	5	257	2.66	6.07	0	5	na	na
1947	na	99	86	260	3.35	4.14	73	11	na	2
1946	na	55	44	240	3.37	3.47	2	41	2	na
1945	na	42	30	238	3.00	3.30	0	27	3	na
1944*	na	258	221	265	3.24	2.93	173	43	5	<1
1943*	na	303	232	252	3.03	3.05	189	38	4	1
1942*	na	320	230	224	3.21	2.59	184	41	4	1
1941	na	78	27	218	1.59	2.82	0	27	<1	<1
1940+	na	84	29	223	1.49	2.38	4	24	1	<1
1939++	na	na	651	na	na	na	na	na	na	na
1938++	na	1016	510	140	3.57	na	431	69	5	4
1937++	na	1035	649	160	3.92	na	577	64	10	1
1936++	na	1025	642	157	3.98	na	606	25	10	1
1935	na	na	na	na	na	na	na	na	na	na
1934	na	4	1	60	2.08	2.00	0	1	0	0

Note: Figures rounded — may not add. (*) includes Montgomery County; (+) includes Chesterfield County; (++) includes Russell County.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1934-1975.

Southwest Virginia Coalfield — Tazewell County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	0	0	540	2614	3154	0	414	2740	0
1987	0	0	555	1425	1980	0	203	1777	0
1986	0	1	883	1374	2258	0	359	1897	0
1985	0	39	1019	1890	2948	0	830	2117	0
1984	0	64	799	1367	2230	0	892	1338	0
1983	5	195	541	258	1000	0	332	668	0
1982	4	108	744	1554	2410	1	953	1456	0
1981	1	149	871	832	1853	0	448	1405	0
1980	1	155	1091	945	2192	0	891	1301	0
1979	1	171	917	719	1808	0	530	1278	0
1978	9	183	448	472	1112	0	464	647	0
1977	5	445	930	794	2175	0	1005	1170	0
1976	102	297	1289	1895	3583	0	1915	1668	0
1975	58	372	1260	919	2609	1	1240	1369	0
1974	14	330	1005	491	1839	4	731	1104	0
1973	2	328	985	325	1640	24	719	897	0
1972	21	458	941	376	1795	51	1321	423	0
1971	42	502	549	254	1348	29	1200	118	0
1970	9	328	390	388	1115	94	804	217	0
1969	7	9	8	327	351	97	60	195	0
1968	3	168	0	130	300	107	194	0	0
1967	145	74	0	145	314	95	219	0	0
1966	45	101	0	95	241	68	173	0	0
1965	114	87	0	178	379	117	261	0	0
1964	6	34	0	199	240	137	102	0	0
1963	88	60	0	231	379	169	210	0	0
1962	132	56	0	273	461	199	262	0	0
1961	121	38	0	355	513	224	289	0	0
1960	112	24	0	346	483	253	230	0	0
1959	121	10	49	492	673	406	267	0	0
1958	55	33	138	441	667	479	188	0	0
1957	2	73	509	519	1103	532	571	0	0
1956	0	38	651	526	1216	567	648	0	0
1955	16	0	487	317	820	na	na	0	0
1954	0	3	527	224	754	na	na	0	0
1953	2	0	1103	380	1485	na	na	0	0
1952	0	11	1323	325	1659	na	na	0	0
1951	0	14	1425	189	1628	na	na	0	0
1950	0	52	1290	181	1524	na	na	0	0
1949	0	14	1164	104	1282	na	na	0	0
1948	0	183	2084	193	2460	na	na	0	0
1947	0	48	2397	283	2727	na	na	0	0
1946	0	92	2189	204	2484	na	na	0	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Tazewell County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	34	687	218	23877	110	21.06	5.20	15	22429
1987	39	590	198	20736	105	16.95	6.17	13	16913
1986	37	548	189	24442	129	21.80	5.93	7	15092
1985	40	771	na	22263	na	na	5.82	25	15104
1984	48	934	na	16202	na	na	6.79	39	30447
1983	21	296	130	28827	130	25.98	8.54	18	10225
1982	36	799	142	26653	188	21.24	8.84	29	19297
1981	23	705	158	24169	153	16.64	9.19	27	25358
1980	24	786	171	26586	155	16.31	9.50	41	14613
1979	29	795	158	20280	128	14.39	8.92	51	9432
1978	33	551	107	24946	233	18.85	12.37	41	6999
1977	43	799	152	17755	117	17.90	6.52	44	5287
1976	38	702	157	19299	187	32.50	3.78	29	8639
1975	43	702	133	15243	115	27.94	4.10	22	8330
1974	36	536	129	12343	96	26.60	3.60	19	6785
1973	28	468	117	12134	104	29.95	3.46	17	5840
1972	37	600	126	4148	33	23.74	1.39	28	5526
1971	33	454	124	9778	79	23.94	3.29	16	6617
1970	26	309	218	10422	48	16.56	2.89	8	3429
1969	20	111	239	4865	20	13.23	1.54	3	2315
1968	17	102	227	4933	22	12.97	1.68	5	4273
1967	12	76	na	4617	na	na	1.12	4	4656
1966	17	86	179	3836	21	15.66	1.37	2	3450
1965	20	128	201	4208	21	14.73	1.42	5	4174
1964	26	141	226	3282	15	7.52	1.93	4	1989
1963	31	168	226	3957	18	9.97	1.76	5	1114
1962	43	211	219	3448	16	10.16	1.58	10	872
1961	38	256	220	3114	14	9.12	1.55	10	2641
1960	49	252	211	2845	13	9.09	1.48	8	658
1959	60	395	177	3203	18	9.62	1.88	8	1110
1958	36	461	192	3877	20	7.54	2.68	16	3824
1957	56	802	216	4084	19	6.37	2.97	21	2622
1956	na	703	202	4753	24	8.56	2.75	23	3744
1955	na	na	175	na	na	na	na	na	na
1954	na	na	173	na	na	na	na	na	na
1953	na	na	203	na	na	na	na	na	na
1952	na	na	211	na	na	na	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	na	183	na	na	na	na	na	na
1949	na	na	159	na	na	na	na	na	na
1948	na	na	254	na	na	na	na	na	na
1947	na	na	273	na	na	na	na	na	na
1946	na	na	247	na	na	na	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Tazewell County
Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	0	0	0	0	0	0	0	0	0	0
1987	1	0	0	0	0	0	0	0	0	0
1986	1	0	0	0	0	0	0	0	0	0
1985	1	0	0	0	0	0	0	0	0	0
1984	1	0	0	0	0	0	0	0	0	0
1983	1	1	17	30141	2168	5	287.70	6.16	1	612
1982	1	0	0	0	0	4	na	0	0	0
1981	1	1	35	20971	599	1	39.57	15.15	0	0
1980	1	1	40	731	18	1	18.28	1.00	0	0
1979	1	1	36	576	16	1	32.25	0.50	0	0
1978	2	2	109	19677	181	9	40.97	4.41	4	12517
1977	3	6	138	6536	47	5	6.64	7.13	-	-
1976	4	19	120	13760	115	102	44.74	2.56	3	6667
1975	6	9	77	12233	159	58	84.35	1.88	2	6306
1974	3	3	29	6106	210	14	147.00	1.33	0	0
1973	1	1	52	4160	80	2	38.46	2.08	0	0
1972	7	7	na	1756	na	21	na	0.60	0	0
1971	3	6	na	13621	146	42	75.85	1.93	1	14641
1970	3	5	na	3021	na	9	na	1.73	0	0
1969	1	2	na	7029	na	7	na	2.00	0	0
1968	4	3	na	1222	na	3	na	1.44	0	0
1967	3	7	na	5080	na	145	na	0.24	0	0
1966	4	12	na	3254	na	45	na	0.87	0	0
1965	3	13	na	8921	na	114	na	1.02	1	8297
1964	3	3	na	3616	na	6	na	1.72	0	0
1963	2	10	na	2505	na	88	na	0.29	0	0
1962	6	24	na	3119	na	132	na	0.57	1	1200
1961	6	20	na	2896	na	121	na	0.48	2	5000
1960	5	14	na	3410	na	112	na	0.42	0	0
1959	9	24	na	2977	na	121	na	0.59	1	78
1958	7	16	na	4668	na	55	na	1.36	1	2695
1957	1	2	na	1840	na	2	na	1.50	0	0
1956	0	0	0	0	0	0	0	0	0	0
1955	na	na	na	na	na	16	na	na	na	na
1954	0	0	0	0	0	0	0	0	0	0
1953	1	na	na	na	na	2	na	na	na	na

Note: No auger mines reported prior to 1953.

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Southwest Virginia Coalfield — Tazewell County
Strip Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	0	0	0	0	0	0	0	0	0	0
1987	2	0	0	0	0	0	0	0	0	0
1986	1	8	0	0	0	1	0	0	0	0
1985	1	12	na	60994	na	39	na	18.90	5	0
1984	2	15	na	30065	na	64	na	8.21	5	48224
1983	2	35	214	36865	172	195	26.07	6.61	5	3561
1982	2	35	223	32621	146	108	13.78	10.62	5	33423
1981	4	36	135	29888	221	149	30.73	7.20	6	29467
1980	4	37	145	22800	200	155	28.89	6.93	4	18357
1979	3	40	238	28892	122	171	17.96	6.76	6	11050
1978	6	37	113	31209	276	183	43.69	6.32	4	12517
1977	13	98	157	16632	106	445	28.93	3.66	5	11609
1976	10	77	119	18856	90	297	32.38	4.89	6	10734
1975	13	85	165	14787	87	372	26.52	3.38	9	6863
1974	9	54	116	10087	90	330	52.67	1.65	8	6045
1973	6	44	116	10466	90	328	64.26	1.40	7	6023
1972	13	85	na	9119	na	458	na	1.69	17	4525
1971	12	83	145	7685	53	502	41.70	1.27	5	9023
1970	10	39	na	6601	na	328	na	0.78	5	4626
1969	4	5	na	4016	na	9	na	2.21	1	3645
1968	4	26	na	7901	na	167	na	1.23	3	6021
1967	3	14	na	6517	na	74	na	1.24	2	7950
1966	4	16	na	6018	na	101	na	0.95	1	5175
1965	4	15	na	3805	na	87	na	0.66	1	8000
1964	2	9	na	3059	na	34	na	0.80	0	0
1963	1	6	na	25000	na	60	na	2.50	0	0
1962	2	10	na	4146	na	56	na	0.74	1	1900
1961	2	12	na	2708	na	38	na	0.85	3	3608
1960	3	12	na	1900	na	24	na	0.93	0	0
1959	3	4	na	3585	na	10	na	1.43	0	0
1958	1	10	na	5768	na	33	na	1.73	0	0
1957	1	20	na	5907	na	73	na	1.62	0	0
1956	0	12	na	6015	na	38	na	1.88	0	0
1955	0	0	0	0	0	0	0	0	0	0
1954	1	2	na	na	na	3	na	na	na	na
1953	0	0	0	0	0	0	0	0	0	0
1952	1	5	na	na	na	11	na	na	na	na
1951	1	4	na	na	na	14	na	na	na	na
1950	3	9	na	na	na	52	na	na	na	na
1949	1	4	na	na	na	14	na	na	na	na
1948	5	28	na	na	na	183	na	na	na	na
1947	3	14	na	na	na	48	na	na	na	na
1946	4	20	na	na	na	92	na	na	na	na

Note: No strip mines reported prior to 1946.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Tazewell County
Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	3	150	252	34168	136	540	0	540	0	14.28	9.49
1987	4	153	247	31546	128	555	0	555	0	14.68	8.70
1986	4	233	205	32880	160	883	0	883	0	18.49	8.68
1985	4	261	na	35880	na	1019	0	1019	0	na	9.19
1984	7	542	na	14571	na	799	0	799	0	na	9.88
1983	3	165	252	31583	125	541	0	541	0	13.02	9.62
1982	3	365	201	26100	130	744	0	744	0	10.15	12.80
1981	3	404	215	24186	112	871	0	871	0	10.02	11.22
1980	3	456	252	29020	169	1091	0	1091	0	9.49	11.99
1979	3	443	216	20861	96	917	0	917	0	9.58	10.08
1978	3	279	110	30679	279	448	0	448	0	14.59	19.12
1977	3	384	221	20264	92	930	0	930	0	10.96	8.36
1976	3	296	160	23898	149	1289	0	1289	0	27.22	5.49
1975	3	394	133	16779	126	1260	346	914	0	24.04	5.25
1974	3	310	154	14069	91	1005	17	988	0	21.05	4.34
1973	4	316	126	13998	111	985	200	785	0	25.00	4.49
1972	2	384	na	2150	na	941	673	267	0	na	0.88
1971	4	262	75	11922	159	549	527	23	0	27.94	5.69
1970	2	160	na	10811	na	390	390	0	Hand	na	4.43
1969	1	4	na	10093	na	8	8	0	0	na	4.91
1968	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0
1959	1	103	na	2883	na	49	7	0	41	na	6.09
1958	1	167	na	4101	na	138	7	0	131	na	4.96
1957	2	378	na	4643	na	509	211	0	298	na	3.45
1956	2	358	na	5977	na	651	542	0	109	na	3.29
1955	na	na	na	na	na	486	na	0	na	na	na
1954	na	na	na	na	na	526	na	0	na	na	na
1953	na	na	na	na	na	1104	na	0	na	na	na
1952	na	na	na	na	na	1323	na	0	na	na	na
1951	na	na	na	na	na	1425	na	0	na	na	na
1950	na	na	na	na	na	1290	na	0	na	na	na
1949	na	na	na	na	na	1164	na	0	na	na	na
1948	na	na	na	na	na	2084	na	0	na	na	na
1947	na	na	na	na	na	2397	na	0	na	na	na
1946	na	na	na	na	na	2189	na	0	na	na	na

Note: (*) MA = Machine; CM = Continuous miner; LW = Longwall. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Tazewell County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	Hand	MA+	CM+	Man Day	Ton
1988	31	537	209	21003	100	2614	0	414	2199	23.29	4.31
1987	33	437	181	16952	94	1425	0	203	1222	18.02	5.19
1986	31	307	182	18676	103	1374	0	359	1015	24.59	4.17
1985	34	498	na	14194	na	1890	0	792	1099	na	3.74
1984	38	377	na	17795	na	1367	0	827	539	na	4.91
1983	15	95	102	21067	207	258	0	132	127	26.63	7.76
1982	30	399	135	26635	197	1554	1	841	711	28.84	6.84
1981	15	264	162	23374	144	832	0	297	535	18.13	7.42
1980	16	292	170	28694	134	945	0	735	210	19.03	7.04
1979	22	311	145	18408	127	719	0	358	361	15.94	7.96
1978	22	233	105	17133	163	472	0	272	200	19.30	8.45
1977	24	311	142	15228	107	794	0	555	239	17.97	5.97
1976	21	310	181	15358	85	1895	0	1516	378	33.76	2.27
1975	21	214	149	12721	85	919	1	464	454	28.82	2.96
1974	21	169	146	10008	69	491	4	371	116	19.89	2.86
1973	17	107	119	7388	62	325	24	189	112	25.50	2.43
1972	15	124	na	7063	na	376	51	169	155	na	2.33
1971	14	107	128	5570	44	254	29	130	96	18.57	2.34
1970	11	105	na	11601	na	388	94	77	217	na	3.14
1969	14	100	na	4655	na	327	97	35	195	na	1.42
1968	9	73	na	4028	na	130	107	23	107	na	2.26
1967	6	55	na	4074	na	95	95	0	0	na	2.36
1966	9	58	na	3354	na	95	68	27	0	na	2.05
1965	13	100	na	3656	na	178	117	61	0	na	2.05
1964	21	129	na	3290	na	199	138	61	0	na	2.13
1963	28	152	na	3222	na	231	169	62	0	na	2.12
1962	35	177	na	3453	na	273	199	74	0	na	2.24
1961	30	224	na	3155	na	355	224	131	0	na	1.99
1960	41	226	na	2860	na	346	253	94	0	na	1.86
1959	47	264	na	3342	na	492	364	128	0	na	1.79
1958	36	268	na	3620	na	441	348	93	0	na	2.20
1957	52	402	na	3479	na	519	234	284	0	na	2.70
1956	na	333	na	3392	na	525	458	68	0	na	2.15
1955	na	na	na	na	na	317	na	na	na	na	na
1954	na	na	na	na	na	224	na	na	na	na	na
1953	na	na	na	na	na	380	na	na	na	na	na
1952	na	na	na	na	na	325	na	na	na	na	na
1951	na	na	na	na	na	189	na	na	na	na	na
1950	na	na	na	na	na	181	na	na	na	na	na
1949	na	na	na	na	na	104	na	na	na	na	na
1948	na	na	na	na	na	193	na	na	na	na	na
1947	na	na	na	na	na	283	na	na	na	na	na
1946	na	na	na	na	na	204	na	na	na	na	na

Note: (+) MA = Machine; CM = Continuous miner. No longwall production reported. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

**Southwest Virginia Coalfield — Tazewell County
Office Workers at Underground Mines: 1988-1956**

Year	Tipple Mines		Truck Mines	
	#	\$/Year	#	\$/Year
1988	0	0	15	22429
1987	0	0	13	16913
1986	0	0	7	15092
1985	6	32402	14	15400
1984	16	43502	18	13905
1983	0	0	12	13802
1982	0	0	24	16355
1981	6	48377	15	14506
1980	18	11708	19	16577
1979	18	8775	27	9511
1978	15	6584	18	4892
1977	18	5176	21	3877
1976	12	7058	8	10179
1975	6	12833	5	6377
1974	5	11183	5	2690
1973	6	9400	5	2025
1972	7	9000	4	3700
1971	5	6800	5	2425
1970	0	0	3	1433
1969	0	0	2	1650
1968	0	0	2	1650
1967	0	0	2	1363
1966	0	0	1	1725
1965	0	0	3	1523
1964	0	0	4	1239
1963	0	0	5	1114
1962	0	0	8	702
1961	0	0	5	1116
1960	0	0	8	658
1959	1	4214	6	765
1958	7	4685	8	3212
1957	8	5509	13	846
1956	17	4764	6	853

Source: *Virginia Division of Mines Annual Reports, 1956-1988.*

Southwest Virginia Coalfield — Tazewell County
Production, Productivity, Price & Distribution: 1975-1936
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	43	1461	2610	133	13.42	28.27	2092	449	2	0
1974	30	536	1947	129	26.60	22.64	1708	239	0	0
1973	15	468	1651	117	26.11	10.92	na	na	na	na
1972	29	600	1790	126	23.68	8.72	na	na	na	na
1971	32	458	1380	124	24.30	8.19	1162	218	2	0
1970	26	309	1115	228	15.83	7.54	1048	46	0	0
1969	20	111	356	239	13.41	5.55	na	na	na	na
1968	17	102	298	227	12.87	4.25	324	32	0	0
1967	12	76	311	na	na	5.03	289	491	0	211
1966	17	168	244	179	8.12	3.58	198	46	0	0
1965	20	198	401	201	10.05	3.09	354	46	0	0
1964	26	161	237	226	6.49	3.33	197	40	0	0
1963	31	215	469	226	9.64	3.26	400	68	0	0
1962	43	248	460	215	8.64	3.26	412	48	0	0
1961	38	604	933	220	7.01	5.34	914	19	0	<1
1960	49	1155	1751	211	7.18	6.10	1597	151	0	3
1959	60	1674	2506	177	8.51	6.02	2125	356	25	0
1958	45	1889	2752	192	7.58	6.61	2575	168	0	10
1957	56	2553	3994	216	7.24	6.60	3834	146	1	14
1956	na	2156	3542	202	8.15	6.06	3442	86	0	14
1955	na	2197	2970	175	7.72	5.28	2891	67	0	12
1954	na	2210	2697	173	7.04	5.14	2574	105	0	17
1953	na	2248	2454	203	5.39	6.11	2394	41	0	19
1952	na	3160	3190	211	4.78	6.11	2978	195	0	18
1951	na	na	3620	na	na	na	na	na	na	na
1950	na	3634	2935	183	4.14	6.12	2841	65	0	28
1949	na	3464	2152	159	3.91	6.12	2046	78	0	29
1948	na	4357	3852	254	3.57	5.99	3852	49	0	42
1947	na	4137	4381	273	3.88	4.94	4286	52	0	42
1946	na	4035	3884	247	3.90	4.24	3814	21	39	11
1945	na	3218	4061	283	3.65	3.78	3990	16	41	14
1944	na	4119	4680	302	3.76	3.58	4623	3	40	14
1943	na	4552	4800	282	3.74	3.17	4741	7	44	9
1942	na	4749	4352	239	3.83	2.81	4256	50	39	8
1941	na	4081	3827	221	4.24	2.45	3732	57	28	11
1940	na	3838	3283	203	4.21	2.08	3187	55	31	10
1939	na	na	2758	na	na	na	na	na	na	na
1938	na	3592	2800	205	3.80	na	2727	48	20	6
1937	na	3650	3010	204	4.03	na	2901	85	21	9
1936	na	3467	2969	215	3.98	na	2901	43	20	5

Note: Figures rounded — may not add.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1936-1975.

Southwest Virginia Coalfield — Tazewell County
Production, Productivity, Price & Distribution: 1935-1900
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1935	na	3282	2387	186	3.92	1.88	2345	37	5	<1
1934	na	3111	2694	226	3.84	1.87	2643	41	9	<1
1933	na	1849	1981	216	4.95	1.19	1941	3	37	<1
1932	na	2120	1808	165	5.16	1.14	1780	0	27	0
1931	na	2415	2215	197	4.66	1.47	2199	0	11	5
1930	na	2234	2507	228	4.92	1.77	2498	na	8	<1
1929	na	2366	2809	274	4.33	1.75	2798	na	8	2
1928	na	2090	2410	251	4.59	1.88	2391	na	13	6
1927	26	2146	2254	244	4.30	1.98	2235	na	13	7
1926	na	2367	2348	249	3.98	2.15	2328	na	12	7
1925	na	2461	2128	243	3.56	2.03	2112	na	9	8
1924	na	2035	1801	212	4.17	2.01	1775	na	19	7
1923	na	2098	1493	168	4.24	3.16	1463	na	16	14
1922	na	2079	1564	194	3.88	2.90	1509	na	25	30
1921	na	1920	1254	195	3.35	3.18	1200	na	25	29
1920	na	2012	1324	217	3.03	4.99	1271	na	38	7
1919	na	1772	1209	222	3.07	2.78	1159	<u>To Coke</u>	32	6
1918	na	1513	1625	240	7.23	2.54	1497	73	14	11
1917	na	1948	1632	228	3.67	2.59	1498	81	16	27
1916	na	1573	1588	234	4.31	1.36	1419	122	42	1
1915	na	1427	1647	189	6.10	1.12	1481	122	15	22
1914	na	1144	1324	179	6.46	1.15	1170	109	13	24
1913	na	1460	1447	236	4.20	1.11	1207	185	18	29
1912	na	1367	1302	203	4.69	1.01	1058	181	11	39
1911	na	1352	1281	210	4.51	0.94	1028	189	11	32
1910	na	1191	1187	196	5.09	0.99	848	263	13	23
1909	na	na	976	na	na	0.94	689	237	12	15
1908	na	1677	980	150	3.90	0.99	767	155	6	11
1907	na	1580	1117	206	3.43	1.11	866	213	8	8
1906	na	1098	911	241	3.44	1.03	688	195	11	12
1905	na	1375	961	231	3.03	0.94	748	185	12	7
1904	na	1088	872	229	3.50	0.91	677	172	1	2
1903	na	1040	841	287	2.81	1.05	617	202	na	na
1902	na	634	724	286	3.99	0.95	539	162	na	na
1901	na	1105	776	245	2.87	0.98	533	226	na	na
1900	na	850	971	222	5.15	0.90	722	234	na	na

Note: Figures rounded — may not add.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1900-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1935.

Southwest Virginia Coalfield — Tazewell County
Production, Productivity, Price & Distribution: 1899-1883
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1899	na	730	844	219	5.28	0.54	604	225	4	11
1898	2	984	983	250	4.04	0.57	528	237	8	9
1897	2	660	708	289	3.71	0.59	524	171	6	8
1896	2	1029	785	270	2.83	0.62	520	254	5	7
1895	2	1077	912	305	2.93	0.61	661	294	3	4
1894	2	825	828	302	3.32	0.70	636	188	1	3
1893	2	600	653	210	3.51	0.80	565	81	4	3
1892	2	700	614	200	4.39	0.82	486	121	1	6
1891	2	746	697	253	3.69	0.80	556	133	5	3
1890	na	1235	759	298	2.06	0.73	587	153	14	5
1889	na	1242	807	na	na	0.87	685	112	1	3
1888	na	na	948	na	na	1.00	789	148	11	na
1887	na	na	617	na	na	0.94	617	161	3	na
1886	na	na	640	na	na	1.00	539	94	7	na
1885	na	na	512	na	na	1.00	512	82	<1	<1
1884	na	na	256	na	na	1.00	272	99	na	na
1883	na	na	92	na	na	1.00	106	39	na	na

Note: Figures rounded — may not add.

Source: U.S. Geological Survey *Mineral Resources* (annual), 1883-1899.

Southwest Virginia Coalfield — Wise County
Production by Mine Type and Method: 1988-1946
(Thousand Tons)

Year	Surface		Underground		TOTAL	Hand	Machine	CM*	LW*
	Auger	Strip	Tipple	Truck					
1988	173	4993	1922	5299	12387	0	5173	6271	943
1987	93	4345	2075	6161	12674	0	5150	6656	869
1986	168	4403	2213	4955	11739	0	5335	5554	848
1985	185	4856	2411	6651	14104	0	5275	8184	644
1984	112	5019	2188	5972	13291	0	6183	6831	277
1983	271	4515	2161	5091	12039	0	6559	5480	0
1982	99	5110	2538	5442	13189	0	6414	6775	0
1981	305	4981	2302	4809	12397	0	6516	5881	0
1980	83	4866	3118	4476	12544	0	6118	6426	0
1979	151	5105	3190	3808	12255	0	6004	6251	0
1978	140	5639	2635	2711	11126	0	6467	4659	0
1977	221	5975	2668	2104	10968	0	7272	3696	0
1976	194	6497	3500	2098	12290	0	7940	4350	0
1975	245	5333	3080	1749	10408	9	6638	3681	80
1974	349	4591	3144	1741	9826	11	6428	2723	663
1973	477	4774	3413	1719	10384	13	7036	3334	0
1972	496	3844	3437	1270	9048	18	5431	3599	0
1971	461	3016	3195	1349	8021	50	4893	3078	0
1970	369	2031	4382	1665	8446	111	4619	3716	0
1969	556	1803	4858	2073	9289	213	4823	4254	0
1968	419	1670	4157	2187	8432	325	4553	3554	0
1967	663	1385	3824	2186	8058	608	5140	2310	0
1966	535	1516	3337	1946	7334	1060	2374	0	0
1965	433	1910	3042	1916	7301	1221	6080	0	0
1964	411	1272	2486	2663	6831	1865	4967	<u>To Coke</u>	0
1963	445	1075	2147	2441	6108	1980	4129	248	0
1962	292	1005	1916	2969	6182	2649	3533	257	0
1961	309	1103	2004	2342	5758	1911	3847	279	0
1960	204	991	2005	2298	5499	1715	3784	374	0
1959	239	1325	2267	2468	6300	1804	4496	333	0
1958	359	1015	2570	2308	6252	1806	4446	212	0
1957	233	1024	2920	2382	6559	2233	4326	231	0
1956	255	1476	4484	2024	8239	1836	6403	na	0
1955	39	879	3754	1913	6585	na	na	na	0
1954	15	503	2310	1234	4062	na	na	na	0
1953	9	554	3376	1312	5251	na	na	na	0
1952	0	749	3551	1098	5398	na	na	na	0
1951	0	516	3852	894	5262	na	na	na	0
1950	0	446	3277	1166	4890	na	na	na	0
1949	0	365	2560	1056	3982	na	na	na	0
1948	0	577	3300	694	4571	na	na	na	0
1947	0	452	3714	844	5010	na	na	na	0
1946	0	446	3379	340	4165	na	na	na	0

Note: (*) CM = Continuous miner; LW = Longwall.

Source: *Virginia Division of Mines Annual Reports, 1946-1988.*

Southwest Virginia Coalfield — Wise County
Mines, Miners, Wages, Productivity & Labor Costs: 1988-1946

Year	Mines	Miners	Days	Average Wages		Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day			#	\$/Year
1988	155	2845	215	25181	117	20.25	5.78	154	24803
1987	162	3089	196	24355	124	20.93	5.94	223	21640
1986	177	3197	179	32682	182	20.51	8.90	189	43447
1985	195	3390	na	24021	na	na	5.77	683	11780
1984	199	3903	na	25801	na	na	7.58	591	45751
1983	178	3104	160	26770	157	24.24	6.90	275	23003
1982	225	3796	147	27589	188	23.64	7.94	204	20630
1981	260	3778	126	24871	197	26.04	7.58	191	22276
1980	242	3805	125	20908	167	26.37	6.34	154	15183
1979	308	4040	104	19293	186	29.16	6.36	203	15338
1978	232	3848	159	19145	220	18.18	6.62	205	13409
1977	254	4108	153	15245	100	17.45	5.71	251	56752
1976	265	3928	152	15583	103	20.50	4.98	187	12976
1975	250	3661	154	14576	95	18.46	5.13	169	9569
1974	244	3112	126	12052	96	25.06	3.82	172	6887
1973	207	2625	121	10994	91	32.69	2.78	154	6764
1972	175	2285	na	10421	na	na	2.63	135	6171
1971	180	1825	118	9214	78	41.54	2.10	161	7074
1970	170	1846	240	14007	58	19.06	1.88	164	5740
1969	175	1823	221	8361	38	23.06	1.64	99	5841
1968	186	1712	na	6878	na	na	1.40	74	6198
1967	184	1724	218	5986	27	21.44	1.28	61	7051
1966	244	1762	216	5441	25	19.27	1.31	61	6620
1965	280	1882	223	4799	22	17.40	1.24	99	4280
1964	325	1970	233	4613	20	14.88	1.33	72	4038
1963	344	2168	199	3961	20	14.16	1.39	93	3051
1962	353	2504	222	4032	18	11.12	1.63	123	3222
1961	337	2569	214	3740	17	10.47	1.67	120	3949
1960	275	2659	214	3730	17	9.66	1.80	109	3807
1959	375	2914	200	3793	19	10.81	1.75	147	3693
1958	370	2974	200	3612	18	10.51	1.72	169	4358
1957	302	3326	195	3961	20	10.11	2.01	152	3652
1956	na	3624	217	4010	18	10.47	1.76	136	4799
1955	na	3239	214	na	na	8.70	na	na	na
1954	na	2624	183	na	na	8.09	na	na	na
1953	na	4041	178	na	na	6.87	na	na	na
1952	na	4374	192	na	na	6.14	na	na	na
1951	na	na	na	na	na	na	na	na	na
1950	na	4981	183	na	na	5.38	na	na	na
1949	na	4706	152	na	na	4.93	na	na	na
1948	na	4218	208	na	na	4.80	na	na	na
1947	na	4153	232	na	na	4.97	na	na	na
1946	na	3580	207	na	na	5.16	na	na	na

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Wise County
Auger Mine Performance: 1988-1953
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	29	83	103	5272	51	173	20.27	2.52	0	0
1987	21	87	102	8624	85	93	10.48	8.07	12	22550
1986	27	186	79	9170	117	168	11.45	10.14	9	13880
1985	23	60	na	19518	na	185	na	6.33	12	13500
1984	22	118	na	14429	na	112	na	15.24	3	4926
1983	19	48	60	19951	333	271	94.26	3.52	2	4421
1982	18	11	43	9923	231	99	209.65	1.10	3	1037
1981	19	57	39	19186	492	305	137.05	3.59	4	9260
1980	15	7	27	12106	448	83	446.92	1.02	0	0
1979	12	42	55	16184	294	151	65.56	4.49	9	18172
1978	12	32	73	16588	227	140	60.03	3.79	7	16114
1977	17	35	96	24982	260	221	65.89	3.94	7	12528
1976	18	75	97	18548	191	194	26.73	7.15	4	12950
1975	18	100	103	22643	220	245	23.79	9.24	14	8107
1974	29	140	102	11949	117	349	24.45	4.79	14	5687
1973	27	57	96	8731	91	477	87.23	1.04	13	1341
1972	37	89	na	8487	na	496	na	1.52	11	1963
1971	28	49	94	5171	55	461	100.12	0.55	4	294
1970	28	42	na	5337	na	369	na	0.61	9	696
1969	24	67	na	6792	na	556	na	0.82	9	5921
1968	18	45	na	4588	na	419	na	0.49	4	2641
1967	16	42	na	6315	na	663	na	0.40	2	2118
1966	17	41	na	5660	na	535	na	0.43	0	0
1965	18	52	na	4578	na	433	na	0.55	11	2171
1964	16	49	na	5747	na	411	na	0.69	5	4790
1963	15	56	na	4331	na	445	na	0.55	20	1978
1962	10	31	na	5112	na	292	na	0.54	9	1711
1961	9	20	na	5131	na	309	na	0.33	8	2438
1960	5	39	na	3407	na	204	na	0.63	0	0
1959	12	54	na	4864	na	239	na	1.10	14	1080
1958	13	25	na	6302	na	359	na	0.44	4	7880
1957	13	7	na	3017	na	233	na	0.10	2	375
1956	6	61	na	4169	na	255	na	0.97	4	3631
1955	4	18	na	na	na	39	na	na	na	na
1954	2	9	na	na	na	15	na	na	na	na
1953	1	4	na	na	na	9	na	na	na	na

Note: No auger mines reported prior to 1953.

Source: Virginia Division of Mines Annual Reports, 1953-1988.

Southwest Virginia Coalfield — Wise County
Strip Mine Performance: 1988-1944
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		TOTAL	Tons Man Day	Wage(\$) Ton	Office Workers	
				\$/Year	\$/Day				#	\$/Year
1988	62	881	216	24290	112	4993	26.24	4.29	71	27209
1987	71	1023	171	18612	109	4345	24.84	4.38	142	18945
1986	75	1074	164	26503	161	4403	25.00	6.46	101	38115
1985	89	1065	na	20482	na	4856	na	4.49	356	11267
1984	96	1156	na	23290	na	5019	na	5.36	183	23654
1983	82	795	164	25044	153	4515	34.63	4.41	115	20089
1982	108	995	152	24083	158	5110	33.79	4.69	52	16245
1981	146	957	110	22437	204	4981	47.32	4.31	108	19460
1980	147	946	105	20842	204	4866	48.99	4.05	69	10651
1979	181	1089	93	19682	212	5105	50.41	4.20	109	15581
1978	137	1201	174	19472	112	5639	26.98	4.15	115	15010
1977	166	1281	164	16973	103	5975	28.44	3.64	135	90367
1976	182	1160	152	16168	106	6497	36.84	2.89	96	11830
1975	175	1113	157	14360	91	5333	30.52	3.00	105	10273
1974	166	728	117	13470	115	4591	53.90	2.14	87	5170
1973	131	629	110	10385	94	4774	69.00	1.37	63	3698
1972	124	501	na	8272	na	3844	na	1.08	60	4211
1971	99	395	106	12495	118	3016	72.03	0.96	45	2962
1970	65	234	na	6800	na	2031	na	0.78	44	4468
1969	38	187	na	7338	na	1803	na	0.76	16	8127
1968	35	181	na	5742	na	1670	na	0.66	11	8554
1967	25	152	na	6343	na	1385	na	0.70	13	8279
1966	26	177	na	5929	na	1516	na	0.69	17	7246
1965	28	210	na	5459	na	1910	na	0.60	25	5034
1964	23	172	na	5312	na	1272	na	0.72	16	7318
1963	22	150	na	5174	na	1075	na	0.72	21	4133
1962	23	167	na	5890	na	1005	na	0.98	19	3167
1961	23	199	na	4265	na	1103	na	0.77	24	3091
1960	27	207	na	4111	na	991	na	0.86	23	3663
1959	23	214	na	4645	na	1325	na	0.75	29	2771
1958	28	192	na	3985	na	1015	na	0.75	18	4530
1957	27	220	na	4662	na	1024	na	1.00	24	3842
1956	na	265	na	3831	na	1476	na	0.69	21	4336
1955	na	na	na	na	na	879	na	na	na	na
1954	na	na	na	na	na	503	na	na	na	na
1953	na	161	na	na	na	554	na	na	na	na
1952	18	169	na	na	na	749	na	na	na	na
1951	16	na	na	na	na	516	na	na	na	na
1950	7	97	na	na	na	446	na	na	na	na
1949	6	83	na	na	na	365	na	na	na	na
1948	na	72	na	na	na	577	na	na	na	na
1947	7	75	na	na	na	453	na	na	na	na
1946	11	141	na	na	na	447	na	na	na	na
1945	7	88	152	na	na	155	11.59	na	na	na
1944	4	34	137	na	na	33	7.14	na	na	na

Note: Virginia's first strip mine produced 6,400 tons in Wise County during 1940. No further reports of strip mining in Wise County until 1944.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Wise County
Tipple Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	MA*	CM*	LW*	Man Day	Ton
1988	7	587	239	34125	143	1922	0	979	943	13.70	10.42
1987	8	612	106	34549	145	2075	0	1207	869	14.32	10.18
1986	8	541	235	35175	150	2213	0	1365	848	17.41	8.60
1985	9	745	na	32664	na	2411	0	1767	644	na	10.09
1984	10	1031	na	33338	na	2188	0	1911	277	na	15.70
1983	10	1076	206	28522	138	2161	0	2161	0	9.75	14.20
1982	11	1359	238	25849	109	2538	0	2538	0	7.85	13.84
1981	16	1463	173	25806	149	2302	108	2193	0	9.09	16.40
1980	21	1698	200	20407	102	3118	280	2838	0	9.18	11.11
1979	21	1823	192	18595	97	3190	76	3113	0	9.11	10.63
1978	20	1710	158	19824	125	2635	22	2613	0	9.75	12.86
1977	23	2044	148	14002	95	2668	166	2502	0	8.82	10.72
1976	20	2000	219	15313	70	3500	317	3183	0	7.99	8.75
1975	18	1872	185	14502	78	3080	502	2579	0	8.89	8.79
1974	16	1730	180	11622	65	3144	559	1921	663	10.10	6.39
1973	14	1473	197	11641	59	3413	791	2622	0	11.76	5.02
1972	11	1363	na	11249	na	3437	310	3127	0	na	4.46
1971	13	995	165	10670	65	3195	379	2816	0	19.46	3.32
1970	13	1129	na	10030	na	4382	826	3555	Hand	na	2.58
1969	17	1014	na	10690	na	4858	635	4217	6	na	2.23
1968	17	873	na	9002	na	4157	644	3507	6	na	1.89
1967	13	869	na	7449	na	3824	1501	2310	12	na	1.69
1966	12	762	na	7481	na	3337	3306	0	30	na	1.71
1965	10	688	na	6937	na	3042	2997	0	45	na	1.57
1964	11	588	na	6867	na	2486	2450	0	36	na	1.62
1963	14	613	na	6361	na	2147	2147	0	0	na	1.82
1962	15	736	na	6006	na	1916	1883	0	33	na	2.31
1961	14	909	na	5600	na	2004	1962	0	42	na	2.54
1960	14	918	na	5787	na	2005	1989	0	16	na	2.65
1959	14	1016	na	5709	na	2267	2266	0	1	na	2.55
1958	13	1144	na	5252	na	2570	2570	0	0	na	2.34
1957	13	1491	na	6137	na	2920	2835	0	85	na	2.79
1956	na	1907	na	5224	na	4484	4363	0	122	na	2.22
1955	na	na	na	na	na	3754	na	0	na	na	na
1954	na	na	na	na	na	2310	na	0	na	na	na
1953	na	na	na	na	na	3376	na	0	na	na	na
1952	na	na	na	na	na	3551	na	0	na	na	na
1951	na	na	na	na	na	3852	na	0	na	na	na
1950	na	na	na	na	na	3277	na	0	na	na	na
1949	na	na	na	na	na	2560	na	0	na	na	na
1948	na	na	na	na	na	3300	na	0	na	na	na
1947	na	na	na	na	na	3714	na	0	na	na	na
1946	na	na	na	na	na	3379	na	0	na	na	na

Note: (*) MA = Machine; CM = Continuous miner; LW = Longwall. A tipple mine maintains loading facilities at a rail siding; all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

Southwest Virginia Coalfield — Wise County
Truck Mine Performance: 1988-1946
(Thousand Tons)

Year	Mines	Miners	Days	Average Wages		Production				Tons	Wage(\$)
				\$/Year	\$/Day	TOTAL	Hand	MA+	CM+	Man Day	Ton
1988	57	1294	209	23008	110	5299	0	7	5292	19.59	5.62
1987	62	1979	140	25274	123	6161	0	712	5449	22.24	5.57
1986	67	1396	133	39604	215	4955	0	765	4190	26.69	11.15
1985	74	1520	na	22441	na	6651	0	234	6418	na	5.13
1984	71	1598	na	23593	na	5972	0	1052	4919	na	6.31
1983	67	1185	177	26614	150	5091	0	1773	3319	24.27	6.19
1982	88	1431	152	31814	209	5442	0	1205	4237	25.02	8.37
1981	79	1301	168	25860	154	4809	0	1121	3688	22.00	7.00
1980	59	1154	173	21751	126	4476	0	888	3588	22.42	5.61
1979	94	1086	110	20193	184	3808	0	671	3137	31.88	5.76
1978	63	905	143	17520	123	2711	0	665	2046	20.95	5.85
1977	48	748	140	15229	109	2104	0	910	1194	20.09	5.41
1976	45	693	144	15063	105	2098	0	931	1167	21.02	4.97
1975	39	576	147	13831	94	1749	1	557	1102	20.65	4.56
1974	33	514	166	11518	69	1741	11	928	802	20.41	3.40
1973	35	466	153	10050	66	1719	13	994	712	24.12	2.72
1972	30	392	na	9103	na	1270	18	781	472	na	2.81
1971	40	386	150	7830	52	1349	50	1037	262	23.30	2.24
1970	64	441	na	6164	na	1665	111	1392	161	na	1.63
1969	101	555	na	4639	na	2073	207	1829	36	na	1.24
1968	116	613	na	4263	na	2187	319	1821	47	na	1.20
1967	130	662	na	3954	na	2186	595	1590	0	na	1.20
1966	189	791	na	3294	na	1946	1030	916	0	na	1.34
1965	224	932	na	3084	na	1916	1176	740	0	na	1.50
1964	275	1161	na	3320	na	2663	1829	834	0	na	1.45
1963	293	1349	na	2646	na	2441	1980	462	0	na	1.46
1962	305	1570	na	2888	na	2969	2616	353	0	na	1.53
1961	291	1441	na	2474	na	2342	1869	473	0	na	1.52
1960	275	1495	na	2420	na	2298	1698	600	0	na	1.57
1959	375	1730	na	2309	na	2468	1803	665	0	na	1.62
1958	370	1613	na	2362	na	2308	1806	502	0	na	1.65
1957	302	1608	na	2471	na	2382	2149	233	0	na	1.67
1956	na	1391	na	2379	na	2024	1714	310	0	na	1.63
1955	na	na	na	na	na	1913	na	na	na	na	na
1954	na	na	na	na	na	1234	na	na	na	na	na
1953	na	na	na	na	na	1312	na	na	na	na	na
1952	na	na	na	na	na	1098	na	na	na	na	na
1951	na	na	na	na	na	894	na	na	na	na	na
1950	na	na	na	na	na	1166	na	na	na	na	na
1949	na	na	na	na	na	1056	na	na	na	na	na
1948	na	na	na	na	na	694	na	na	na	na	na
1947	na	na	na	na	na	844	na	na	na	na	na
1946	na	na	na	na	na	340	na	na	na	na	na

Note: (+) MA = Machine; CM = Continuous miner. No longwall production reported. A truck mine hauls its production to the nearest rail loading site (tipple); all in Virginia are underground operations.

Source: Virginia Division of Mines Annual Reports, 1946-1988.

**Southwest Virginia Coalfield — Wise County
Office Workers at Underground Mines: 1988-1956**

Year	Tipple Mines		Truck Mines	
	#	\$/Year	#	\$/Year
1988	18	32821	65	19955
1987	26	34549	43	19761
1986	23	35175	66	60462
1985	25	32664	290	10053
1984	31	33338	374	58512
1983	28	28522	130	25548
1982	31	25849	118	24264
1981	33	25806	46	35764
1980	44	20407	41	17924
1979	37	18595	48	16479
1978	43	19824	40	12087
1977	87	14002	22	11156
1976	69	15313	18	6215
1975	32	14502	18	6111
1974	54	11622	14	2933
1973	64	11641	14	3000
1972	44	11249	20	1964
1971	95	10670	17	2480
1970	87	10030	24	1147
1969	52	10690	22	1200
1968	39	9002	20	2419
1967	36	7449	10	5830
1966	34	7481	10	4278
1965	32	6937	31	1726
1964	22	6867	29	771
1963	23	6361	29	734
1962	50	6006	45	110
1961	58	5600	30	1436
1960	57	5201	29	1172
1959	69	5630	35	1683
1958	66	5327	38	2221
1957	91	4728	35	796
1956	77	6622	36	1303

Source: *Virginia Division of Mines Annual Reports, 1956-1988.*

Southwest Virginia Coalfield — Wise County
Production, Productivity, Price & Distribution: 1975-1936
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1975	250	3661	10408	154	18.46	26.37	9167	1352	139	0
1974	117	3112	9805	175	18.04	22.50	9277	524	2	0
1973	186	2705	10382	242	15.86	16.87	na	na	na	na
1972	192	2345	9041	na	na	8.19	na	na	na	na
1971	164	1825	7936	na	na	7.29	7721	214	2	0
1970	135	2070	8466	240	17.76	6.16	7913	521	21	0
1969	144	1966	9141	221	20.10	4.97	8663	290	187	0
1968	153	1712	8654	na	na	4.82	7851	491	0	211
1967	154	1973	8171	218	14.59	4.51	7523	430	0	218
1966	196	1794	7331	216	18.94	4.46	6531	596	0	203
1965	200	1685	7280	223	19.71	4.01	6414	650	0	216
1964	257	1485	6804	233	20.51	4.01	5489	1100	0	215
1963	290	2155	6242	199	14.53	4.06	5059	980	0	203
1962	291	2568	6161	222	10.79	3.98	5037	843	0	280
1961	236	3268	7595	214	10.86	4.51	6784	513	0	297
1960	232	2474	5474	214	10.34	4.51	4846	462	0	165
1959	255	2913	6335	200	10.87	4.55	5534	504	0	297
1958	294	3211	6288	200	9.77	4.56	5754	371	0	163
1957	237	3385	6427	195	9.71	4.85	5827	433	0	167
1956	219	3627	8050	217	10.21	4.25	7326	574	0	149
1955	na	3239	6026	214	8.70	4.23	5574	402	0	50
1954	na	2624	3879	183	8.09	4.25	3317	483	0	79
1953	na	4041	4951	178	6.87	5.00	4223	520	0	207
1952	na	4374	5142	192	6.14	5.04	4554	349	0	240
1951	na	na	5262	na	na	na	na	na	na	na
1950	na	4981	4900	183	5.38	5.02	4429	214	0	258
1949	na	4706	3517	152	4.93	5.46	3195	106	0	216
1948	na	4218	4214	208	4.80	5.63	3899	60	0	255
1947	na	4153	4797	232	4.97	4.49	4358	45	0	394
1946	na	3580	3826	207	5.16	3.61	3438	87	23	278
1945	na	3886	4255	269	4.07	3.22	3832	105	26	292
1944	na	4248	4866	389	3.98	3.00	4354	78	30	404
1943	na	4536	4656	266	3.86	2.76	4038	88	29	502
1942	na	4749	4352	239	3.83	2.81	4077	114	26	569
1941	na	4760	4256	222	4.02	2.21	3610	91	24	530
1940	na	4223	3193	174	4.36	2.08	2754	80	24	335
1939	na	na	2941	na	na	na	na	na	na	na
1938	na	4507	2733	134	4.53	1.95	2428	35	22	247
1937	na	4355	3302	181	4.19	na	2821	23	24	429
1936	na	3971	2934	178	4.10	na	2535	26	26	347

Note: Figures rounded — may not add.

Source: U.S. Bureau of Mines *Minerals Yearbook*, 1936-1975.

Southwest Virginia Coalfield — Wise County
Production, Productivity, Price & Distribution: 1935-1900
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1935	na	3790	2795	188	3.92	1.76	2503	14	25	254
1934	na	3665	2836	194	3.99	1.67	2642	16	25	153
1933	na	3268	2816	177	4.87	1.22	2634	16	23	144
1932	na	3715	2701	136	5.36	1.24	2556	2	23	118
1931	na	4139	3348	155	5.22	1.47	2199	0	29	189
1930	na	4504	4179	202	4.59	1.61	3761	<u>To Coke</u>	36	382
1929	na	4957	5302	256	4.18	1.63	4744	495	38	24
1928	na	5462	5062	227	4.08	1.70	4615	378	46	23
1927	na	6197	5731	244	3.79	1.79	5126	522	52	31
1926	na	6512	6563	269	3.74	1.83	5909	577	46	31
1925	na	6174	6014	267	3.65	1.75	5331	614	50	19
1924	na	6011	5164	243	3.54	2.04	4321	717	102	25
1923	na	6916	6013	231	3.76	2.67	4701	1161	126	25
1922	na	6489	5023	205	3.54	2.43	4352	584	58	28
1921	na	5743	3469	153	3.95	3.07	2943	423	73	31
1920	na	6894	6062	290	3.24	3.78	4236	1622	181	23
1919	na	5500	5049	273	3.36	2.50	3425	1485	80	59
1918	na	5508	5514	287	3.49	2.44	3656	1528	287	44
1917	na	5515	5427	295	3.34	1.79	3328	1954	80	65
1916	na	5291	5229	283	3.49	0.97	3325	1802	48	54
1915	na	4864	4186	240	3.59	0.93	3251	835	28	72
1914	na	5396	4621	242	3.54	0.94	3325	1183	35	78
1913	na	4933	5104	291	3.56	0.96	3236	1738	35	94
1912	na	4451	4500	261	4.59	0.91	3008	1336	65	91
1911	na	3582	3754	274	3.83	0.88	2470	1155	40	89
1910	na	4449	3731	259	3.23	0.88	1815	1805	40	70
1909	na	na	2841	na	na	0.87	1224	1468	30	120
1908	na	3324	2559	204	3.77	0.99	990	1467	27	55
1907	na	3846	3146	262	3.12	0.97	1079	1962	36	68
1906	na	3382	3041	260	3.46	0.95	972	1977	29	63
1905	na	3700	2991	247	3.27	0.84	957	1933	36	63
1904	na	3779	2514	240	2.77	0.81	833	1405	25	46
1903	na	4371	2563	266	2.20	0.90	968	1539	15	41
1902	na	3143	2422	295	2.61	0.74	875	1523	7	18
1901	na	2894	1919	245	2.71	0.80	834	1065	5	15
1900	na	2633	1364	245	2.11	0.84	574	739	4	13

Note: Figures rounded — may not add.

Sources: U.S. Geological Survey *Mineral Resources* (annual), 1900-1931. U.S. Bureau of Mines *Minerals Yearbook*, 1932-1935.

Southwest Virginia Coalfield — Wise County
Production, Productivity, Price & Distribution: 1889-1899
(Thousand Tons)

Year	Mines	Miners	Tonnage	Days	Tons	Price(\$)	Distribution			
					Man Day	Ton	Rail	Truck	Local	Mine
1899	11	1113	1233	284	3.90	0.64	557	663	5	8
1898	8	984	992	250	4.04	0.57	468	513	4	7
1897	8	818	712	249	3.50	0.66	372	314	19	7
1896	13	595	358	186	3.23	0.61	230	96	29	3
1895	11	582	337	190	3.04	0.57	320	11	4	1
1894	13	514	331	155	4.15	0.70	326	0	4	1
1893	na	260	126	260	3.26	0.90	124	0	1	1
1892	na	na	na	na	na	na	na	na	na	na
1891	na	na	na	na	na	na	na	na	na	na
1890	na	na	na	na	na	na	na	na	na	na
1889	na	na	<1	na	na	1.39	na	na	<1	na

Note: Figures rounded — may not add.

Source: U.S. Geological Survey *Mineral Resources* (annual), 1889-1899.