ARCH COAL INC
Form 10-K
March 11, 2005

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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended: December 31, 2004

or

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to
Commission File Number: 1-13105
ARCH COAL, INC.
(Exact name of registrant as specified in its charter)

Delaware	**43-0921172**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
One City Place Drive, Suite 300, St. Louis, MO	**63141**
(Address of principal executive offices)	(Zip Code)

(Registrant s telephone number, including area code): (314) 994-2700
Securities registered pursuant to Section 12(b) of the Act:

Common Stock, $.01 par value	**New York Stock Exchange**
Preferred Share Purchase Rights	**New York Stock Exchange**
5% Perpetual Cumulative Convertible Preferred Stock	**None**
Title of Each Class	Name of Each Exchange On Which Registered

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes þ No o

At March 1, 2005, based on the closing price of the registrant s common stock on the New York Stock Exchange on that date, the aggregate market value of the voting stock held by non-affiliates of the registrant

was approximately $2,376.8 million. In determining this amount, the registrant has assumed that all of its executive officers and directors, and persons known to it to be the beneficial owners of more than five percent of its common stock, are affiliates. Such assumption shall not be deemed conclusive for any other purpose.

At March 1, 2005, there were 62,721,235 shares of the registrant s common stock outstanding.

Documents incorporated by reference:

1. Portions of the registrant s definitive proxy statement, to be filed with the Securities and Exchange Commission no later than April 1, 2005, are incorporated by reference into Part III of this Form 10-K.

2. Portions of the registrant s Annual Report to Stockholders for the year ended December 31, 2004 are incorporated by reference into Parts I, II and IV of this Form 10-K.

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PART I

ITEM 1. BUSINESS

General

Arch Coal, Inc. (Arch Coal or the Company) is one of the largest coal producers in the United States. The Company mines, processes and markets compliance and low-sulfur coal from mines located in both the eastern and western United States, enabling it to ship coal cost-effectively to most of the major domestic coal-fired electric generation facilities. As of December 31, 2004, the Company operated or controlled 27 mines and controlled approximately 3.7 billion tons of proven and probable coal reserves. Arch Coal sold 128.4 million tons of coal in 2004. The Company sells substantially all of its coal to producers of electric power, steel producers and industrial facilities.

The Company owns a 99% membership interest in Arch Western Resources, LLC (Arch Western), a joint venture that was formed in connection with the Company s acquisition of the United States coal operations of Atlantic Richfield Company on June 1, 1998. The principal operating units of Arch Western are Thunder Basin Coal Company, L.L.C., which operates the Black Thunder mine in the Southern Powder River Basin in Wyoming; Mountain Coal Company, L.L.C., which operates the West Elk mine in Colorado; Canyon Fuel Company, LLC (Canyon Fuel), which operates three mines in Utah; and Arch of Wyoming, LLC, which operated two mines in the Hanna Basin of Wyoming which are now in reclamation mode. Arch Western owns 100% of the membership interests of Thunder Basin Coal Company, L.L.C., Mountain Coal Company, L.L.C. and Arch of Wyoming, LLC. Arch Western owns a 65% membership interest in Canyon Fuel, with the remaining 35% membership interest owned by Arch Coal directly.

Business Environment

United States Coal Markets. Production of coal in the United States has increased from 434 million tons in 1960 to about 1.1 billion tons in 2004. The following table sets forth demand trends for United States coal by consuming sector through 2025 as compiled, preliminary(p) or forecasted(f) by the United States Department of Energy/ Energy Information Agency.

Consumption by Sector	2002	2003	2004(p)	2005(f)	2010(f)	2015(f)	2020(f)	2025(f)	Annual Growth 2003-2025(f)
				(tons in millions)					
Electric Generation	978	1,005	1,012	1,042	1,139	1,185	1,267	1,425	1.6%
Industrial	61	61	61	66	66	65	66	66	0.3%
Steel Production	24	24	24	24	20	18	15	13	(2.7%)
Residential/ Commercial	0	4	3	5	5	5	5	5	0.4%
Export	40	43	49	48	42	35	35	26	(2.3%)
Total	1,102	1,137	1,149	1,185	1,272	1,308	1,388	1,535	1.5%

Electricity Generation. Coal has consistently maintained a 49% to 53% market share over competing energy sources to generate electricity during the past ten years because of its relatively low cost and its availability throughout the United States. Coal is the lowest cost fossil-fuel used for base-load electric power generation considerably less expensive than natural gas or oil. Coal-based generation is also competitive with nuclear power generation, especially on an all-in cost per megawatt-hour basis. Hydroelectric power is inexpensive but is limited by both geography and susceptibility to seasonal and climatic conditions. Non hydropower renewable power generation accounts for only 1.9% of all the electricity generated in the U.S. and is limited by resources and/or technology. Consequently, approximately 91% of the coal produced in the

United States in 2004 was sold in the domestic market as a fuel to the electric generation segment. The remainder of the tons were sold in 2004 as steam coal for industrial and residential purposes, into the export market, and as metallurgical coal. In addition to the relative competitiveness of coal-fired generation plants, coal consumption patterns are also influenced by the demand for electricity, governmental regulation impacting coal production and power generation, technological developments and the location, availability and quality of competing sources of coal, as well as other fuels such as natural gas, oil and nuclear and alternative energy sources such as hydroelectric power.

Long-term demand for electric power will depend upon a variety of economic, regulatory, technological and climatic factors beyond our control. Historically, domestic demand for electric power has increased as the United States economy

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has grown. Two important regulatory initiatives, one designed to increase competition among utilities and lower the cost of electricity for consumers, and another to improve air quality by reducing the level of sulfur emitted from coal-burning power generation plants, have had and are expected to continue to have significant effects on the electric utility industry and its coal suppliers.

According to the Energy Information Administration, coal is expected to remain the primary fuel for electricity generation through 2025. The following table sets forth the source fuel for electricity generation from 2002 through 2025 as compiled, preliminary(p) or forecasted(f) by the Energy Information Administration.

	2002	2003	2004(p)	2005(f)	2010(f)	2015(f)	2020(f)	2025(f)	Annual Growth 2003-2025
				(billion kilowatt hours)					
Coal	1,933	1,974	1,973	2,055	2,250	2,306	2,495	2,890	1.8%
Petroleum	95	119	122	121	127	135	143	148	0.9%
Natural Gas	691	650	721	698	922	1,171	1,375	1,403	4.4%
Nuclear	780	764	793	796	813	826	830	830	0.4%
Hydro/ Renewable/other	360	376	369	416	414	452	471	499	1.4%
Total	3,858	3,883	3,977	4,086	4,526	4,890	5,314	5,770	1.9%

Coal s primary advantage is its relatively low cost compared to other fuels used to generate electricity. The following table sets forth the Energy Information Agency s forecast of delivered fuel prices to electric utilities through 2025 as compiled, preliminary(p) or forecasted(f) by the Energy Information Administration. The table below is derived from the Energy Information Administration s long-term forecast published in December 2004 and is presented in 2003 dollars.

	2002	2003	2004(p)	2005(f)	2010(f)	2015(f)	2020(f)	2025(f)	Annual Growth 2003-2025(f)
				(dollars per million Btus)					
Annual Energy Outlook									
Petrol (Residual)	$ 3.73	$ 4.74	$ 4.77	$ 5.38	$ 4.19	$ 4.44	$ 4.71	$ 5.00	0.2%
Natural Gas	3.56	5.37	5.82	5.92	4.27	4.81	5.20	5.44	0.0%
Coal	1.25	1.28	1.34	1.29	1.25	1.23	1.25	1.31	0.1%

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Coal Production. United States coal production was 1.1 billion tons in 2004. The following table, derived from data prepared by the Energy Information Administration, sets forth principal United States production statistics for the periods indicated as compiled or preliminary(p).

	1980	1985	1990	1995	2000	2003	2004(p)
Total Tons (in millions)	830	884	1,029	1,033	1,074	1,072	1,111
East	566	554	627	544	508	469	486
West	264	330	402	489	566	603	625
Underground	329	349	424	396	374	353	367
Surface	501	555	605	637	700	719	744
Percent of Total Tons							
East	68%	63%	61%	53%	47%	44%	44%
West	32	37	39	47	53	56	56
Underground	40	39	41	38	35	33	33
Surface	60	61	59	62	65	67	67
Number of Mines (from Platts)							
Underground	1,875	1,695	1,422	977	707	537	534
Surface	1,997	1,660	1,285	1,127	746	737	761
Total	3,872	3,355	2,707	2,104	1,453	1,274	1,295
Average Number of Mine Employees (from Platts)							
Underground	150,328	107,357	63,960	44,254	36,825	31,948	32,407
Surface	74,610	61,924	43,402	31,777	24,640	26,218	26,774
Total	224,938	169,281	107,362	76,031	61,465	58,166	59,181
Average Production per Mine (tons in thousands)							
Underground	177	203	297	402	531	613	687
Surface	249	325	472	568	935	974	979

Sales and Marketing

The Company sells coal both under long-term contracts, the terms of which are 12 months or greater, and on a current market or spot basis. When the Company s coal sales contracts expire or are terminated, it is exposed to the risk of having to sell coal into the spot market, where demand is variable and prices are subject to greater volatility. Historically, the price of coal sold under long-term contracts has exceeded prevailing spot prices for coal. However, with more volatility experienced in the market in the past several years, new contracts have been priced at or below existing spot rates.

The terms of the Company s coal sales contracts result from bidding and extensive negotiations with customers. Consequently, the terms of these contracts typically vary significantly in many respects, including price adjustment features, provisions permitting renegotiation or modification of coal sale prices, coal quality requirements, quantity parameters, flexibility and adjustment mechanisms, permitted sources of supply, treatment of environmental constraints, options to extend, and force majeure, suspension, termination and assignment provisions.

Provisions permitting renegotiation or modification of coal sale prices are present in many of the Company s more recently negotiated long-term contracts and usually occur midway through a contract or every two to three years, depending upon the length of the contract. In some circumstances, customers have the option to terminate the contract if prices have increased by a specified percentage from the price at the commencement of the contract or if the parties cannot agree on a new price. The term of sales contracts has decreased over the last two decades as competition in the coal industry has increased and, more recently, as electricity generators have prepared themselves for federal Clean Air Act requirements and the impending deregulation of their industry.

Arch Coal also participates in the over the counter market for a small portion of its production.

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Competition

The coal industry is intensely competitive, primarily as a result of the existence of numerous producers in the coal producing regions in which the Company operates. The Company competes with several major coal producers in the Central Appalachian and Powder River Basin areas. It also competes with a number of smaller producers in those and its other market regions. Additionally, coal competes for share of the power generation market with other fuels such as natural gas and petroleum.

Operations

As of December 31, 2004, the Company operated a total of 27 mines, all located in the United States. The Company uses several distinct extraction techniques: continuous mining, longwall mining, truck-and-shovel mining, truck-and-loader mining, highwall mining, excavator-and-loader mining and dragline mining. Coal is transported from the Company s mining complexes to customers by means of railroad cars, river barges or trucks, or a combination of these means of transportation. As is customary in the industry, virtually all the Company s coal sales are made F.O.B. mine or loadout, meaning that customers are responsible for the cost of transporting purchased coal to their facilities.

The Company manages its production sources to supply coal within three of the major low sulfur coal producing basins in the United States the Central Appalachia Basin, Powder River Basin and the Western Bituminous Basin. These geographically distinct areas are characterized by similar geology, coal transportation routes to consumers, regulatory environments and coal quality. These regional similarities have caused market and contract pricing environments to develop by coal basin and form the basis for the Company s segmentation of its operations.

Coal prices are influenced by a number of factors and vary dramatically by region. As a result of these regional characteristics, prices of coal within a given major coal producing basin tend to be relatively consistent. The two principal components of the price of coal within a region are the price of coal at the mine, which is influenced by market conditions (supply and demand) and by mine operating costs, coal quality, and transportation costs involved in moving coal from the mine to the point of use. In addition to supply and demand factors, the price of coal at the mine is influenced by geologic characteristics such as seam thickness, overburden ratios and depth of underground reserves. It is generally cheaper to mine coal seams that are thick and located close to the surface than to mine thin underground seams. Underground mining, which is the mining method the Company uses in the Western Bituminous and also a method the Company primarily uses at certain mines in Central Appalachia, is generally more expensive than surface mining, which is the mining method the Company uses in the Powder River Basin and also for certain of its Central Appalachian mines. This is the case because of the higher capital costs, including costs for modern mining equipment and construction of extensive ventilation systems and higher labor costs due to lower productivity that are associated with underground mining.

In addition to the cost of mine operations, the price of coal is also a function of quality characteristics such as heat value, sulfur, ash and moisture content. Higher carbon and lower ash content generally result in higher prices. Coal from the Central Appalachian Basin generally has a sulfur content of 0.7% to 1.5% and a high heat content of between 12,000 and 14,000 Btus per pound. The coal from the Western Bituminous region typically has a lower sulfur content of 0.50% to 1% and a lower heat content of between 10,500 and 12,500 Btus per pound. Powder River Basin coal generally has the lowest relative sulfur content among the Company s regions, with a sulfur content of between 0.15% and 1.20%, and the lowest relative heat content, which typically is between 7,500 and 10,000 Btus per pound.

The Company s management, including its Chief Executive Officer and Chief Operating Officer, reviews and makes resource allocations based on the goal of maximizing its profits within a coal basin in light of the comparative cost structures of its various operations. Because the Company s customers purchase coal on a regional basis, contracts can generally be sourced from several different locations within a region. Once the Company has a contractual commitment to purchase an amount of coal at a certain price, the Company s central marketing group assigns contract shipments to its various mines which can be used to source the coal in the appropriate region.

The focus of the Company s operating structure is on the reduction of controllable costs. Although revenues are reported at the mine level, the Company s mine management is asked only to manage volume and revenue adjustments due to quality variances for contract shipments assigned to their mines. In 2004, the Company s mine management was evaluated and compensated in part on the basis of operating costs per ton

at the mine level, as well as on the basis of other non-financial measures such as safety and environmental results.

Based on its management structure, the Company does not utilize mine-by-mine profit as a measure to make decisions. As a result of its management of revenues on a regional basis, the reported profit at any individual mine may not

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be meaningful and is not indicative of the future economic prospects of the mine. This is the case because an individual mine s profit is based on the contract shipments that are assigned to it by the central marketing group and the pricing of those contracts, with assignments typically being made on the basis of the availability of coal and the cost of transporting the coal to the customer. Therefore, a mine that is assigned a lower-price contract will have a lower profit margin than a similar mine with similar costs that ships a nearly identical product on a higher-price contract.

The following maps show the locations of the Company s significant mining operations:

Central Appalachia Operations

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Powder River Basin and Western Bituminous Operations

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The following table provides the location and a summary of information regarding the Company s principal mining complexes and the total sales associated with these operations for the prior three years:

Mining Complex (Location)	Captive Mine(s)(1)	Contract Mine(1)	Mining Equipment(2)	Transportation	Tons Sold 2002	2003	2004
Central Appalachia							
Mingo Logan (WV)	U	U	LW, C	NS	5.8	5.5	5.1
Coal-Mac (WV)(3)	S(2)	U	L, E	Barge/NS/CSX	2.1	2.1	2.6
Hobet 21 (WV)(4)	S	U	D, L, S, C	CSX	5.3	5.2	4.6
Arch of West Virginia (WV)(5)	S	U	D, L, E	CSX	3.6	2.8	3.1
Samples (WV)(6)	S	U	D, L, S, HW	Barge/CSX	5.5	5.5	5.1
Campbells Creek (WV)		U(2)		Barge	1.1	1.0	1.2
Lone Mountain (KY)	U(3)		C	NS/CSX	2.6	2.7	2.9
Cumberland River (VA, KY)	S(2), U(2)	U, S	L, C	NS	1.6	1.5	1.6
Western United States							
Black Thunder (WY)(7)	S		D, S	UP/BN	65.1	62.6	75.1
Coal Creek (WY)(8)				UP/BN			
West Elk (CO)	U		LW, C	UP	6.7	6.5	6.2
Skyline (UT)(9)	U		LW, C	UP	3.4	3.1	0.6
SUFCO (UT)(9)	U		LW, C	UP	7.2	7.5	7.8
Dugout Canyon (UT)(9)	U		LW, C	UP	2.0	2.5	3.8
Arch of Wyoming (WY)(10)				UP	0.6	0.5	0.2
Totals					112.6	109.0	119.9

S	=	Surface Mine	D	=	Dragline	UP	=	Union Pacific Railroad
U	=	Underground Mine	L	=	Loader/Truck	CSX	=	CSX Transportation
			S	=	Shovel/Truck	BN	=	Burlington Northern Railroad
			E	=	Excavator/Truck	NS	=	Norfolk Southern Railroad
			LW	=	Longwall			
			C	=	Continuous Miner			
			HW	=	Highwall Miner			

(1) Amounts in parenthesis indicate the number of captive and contract mines at the mining complex or location at December 31, 2004. Captive mines are mines which the Company owns and operates on land owned or leased by it. Contract mines are mines which other operators mine for the Company under contracts on land owned or leased by the Company.

(2) Reported for captive operations only.

(3) Utilized a 23-cubic-yard loader.

(4) Utilizes an 83-cubic-yard dragline and a 51-cubic-yard shovel.

(5) Utilizes two 37-cubic-yard hydraulic excavators and two 23-cubic-yard loaders.

(6) Utilizes a 105-cubic-yard dragline, one 53-cubic-yard shovels and three 28-cubic-yard loaders.

(7) Utilizes 164-cubic-yard, 130-cubic-yard, 106-cubic-yard, 78-cubic-yard and 45-cubic-yard draglines and 85-cubic-yard, 73-cubic-yard, 68-cubic-yard, 55-cubic-yard and 53-cubic-yard shovels.

(8) The Company idled its mining operations at Coal Creek during the third quarter of 2000 because of unfavorable conditions existing in the market environment.

(9) Prior to July 31, 2004 the Company owned a 65% interest in Canyon Fuel and accounted for it as an equity investment and its financial statements and tons sold were not consolidated into the Company s financial statements. Subsequent to July 31, 2004, the Company acquired the remaining 35% of Canyon Fuel and its financial statements and tons sold are consolidated into the Company s financial statements. Amounts shown represent 100% of Canyon Fuel s sales volume for all periods presented. The Skyline mine was idled in 2004.

(10) This complex was put into reclamation mode in 2004.

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Mingo Logan. The Mingo Logan mine is an underground operation located in Mingo County and Logan County, West Virginia on approximately 12,000 acres. Six continuous miners support a longwall. The mined coal is processed through a preparation plant at the mine. The loadout facility at Mingo Logan is serviced by Norfolk Southern Railroad.

Coal-Mac. The Coal-Mac mine is located in Mingo County and Logan County, West Virginia on approximately 9,100 acres. The equipment at the mine consists of one hydraulic excavator, six wheel-loader spreads, 2 loadout facilities, and a preparation plant. Coal-Mac s loadout facilities are serviced by Norfolk Southern Railroad and CSX Transportation.

Hobet 21. The Hobet 21 mine is located in Boone County and Lincoln County, West Virginia on approximately 19,700 acres. Equipment at Hobet 21 includes a dragline, electric shovel and wheel-loader spread. The coal at Hobet 21 is processed at an on-site preparation plant and transported from Hobet 21 s loadout facility, which is serviced by CSX Transportation.

Arch of West Virginia. The Arch of West Virginia mine is located primarily in Logan County, West Virginia on approximately 19,700 acres. Two hydraulic excavators and two loaders are present. The loadout facility at the mine is serviced by CSX Transportation.

Samples. The Samples mine is located primarily in Kanawha County, West Virginia on approximately 10,850 acres. Equipment at Samples includes a dragline, a shovel and four loaders. Coal from Samples is transported by rail to a loadout facility approximately 1.4 miles from the mine. CSX Transportation services this loadout. Coal also is transported by barge from this loadout.

Lone Mountain. The Lone Mountain mine is located in Harlan County, Kentucky and Lee County, Virginia on approximately 15,200 acres. Continuous miner units and bridge units are present at Lone Mountain. The loadout facility at Lone Mountain is serviced by Norfolk Southern Railroad and CSX Transportation.

Cumberland River. The Cumberland River mine is located in Wise County, Virginia and Letcher County, Kentucky on approximately 12,200 acres. Mining techniques include both surface and underground mining utilizing endloaders with trucks and continuous miners. Cumberland River s coal is processed at an on-site preparation plant and its loadout is serviced by Norfolk Southern Railroad.

Black Thunder. The Black Thunder mine is located in Campbell County, Wyoming on approximately 24,150 acres. Mining the approximately 68-foot coal seam are five draglines and eleven shovels. There is no washing plant at Black Thunder. The coal is crushed through either the near pit crushing and conveying system or the primary system. Coal from these two crushing facilities is conveyed into one of two silos or a slot storage facility. Coal is shipped through three loadouts on trains operated by Burlington Northern and Union Pacific.

Coal Creek. The Coal Creek mine is located in Campbell County, Wyoming on approximately 7,030 acres. Coal Creek has been idle since July 2000. The Coal Creek mine is located on a joint rail line operated by Burlington Northern and Union Pacific.

West Elk. The West Elk mine is an underground operation located in Gunnison County, Colorado on approximately 11,900 acres. The coal is mined by three continuous miners in support of a longwall. The loadout facility at the mine is serviced by the Union Pacific Railroad.

Skyline. Canyon Fuel s Skyline mine is an underground longwall mine located in Carbon County and Emery County, Utah on approximately 9,650 acres. The loadout facility at Skyline is serviced by the Union Pacific Railroad. The Skyline mine was idled during 2004.

SUFCO. Canyon Fuel s SUFCO mine, an underground longwall mine, is located in Sevier County, Juab County and Emery County, Utah on approximately 26,700 acres. Two continuous miners support the longwall. All of the coal produced from the mine is crushed at a facility located at the mine and trucked either directly to customers or to a train loadout located approximately 80 miles from the mine. The Union Pacific Railroad serves this loadout.

Dugout Canyon. Canyon Fuel s Dugout Canyon mine is an underground longwall mine located in Carbon, County, Utah on approximately 7,800 acres. Two continuous miners support the longwall operation. The coal produced is crushed at the mine and trucked to a third party loadout served by the Union Pacific Railroad.

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Transportation

Coal from the mines of the Company s subsidiaries is transported by rail, truck and barge to domestic customers and to Atlantic coast terminals for shipment to domestic and international customers.

The Company s Arch Coal Terminal is located on a 60-acre site on the Big Sandy River approximately seven miles upstream from its confluence with the Ohio River. Arch Coal Terminal provides coal storage and transloading services.

Company subsidiaries together own a 17.5% interest in Dominion Terminal Associates (DTA), which leases and operates a ground storage-to-vessel coal transloading facility (the DTA Facility) in Newport News, Virginia. The DTA Facility has a rated throughput capacity of 20 million tons of coal per year and ground storage capacity of approximately 1.7 million tons. The DTA Facility serves international customers, as well as domestic coal users located on the eastern seaboard of the United States.

Regulations Affecting Coal Mining

The information contained in the Contingencies Reclamation and Certain Trends and Uncertainties Environmental and Regulatory Factors sections of Management s Discussion and Analysis of the Company s 2004 Annual Report to Stockholders is incorporated herein by reference.

Glossary of Selected Mining Terms

Assigned Reserves. Recoverable coal reserves that have been designated for mining by a specific operation.

Auger Mining. Auger mining employs a large auger, which functions much like a carpenter s drill. The auger bores into a coal seam and discharges coal out of the spiral onto waiting conveyor belts. After augering is completed, the openings are reclaimed. This method of mining is usually employed to recover any additional coal left in deep overburden areas that cannot be reached economically by other types of surface mining.

Btu British Thermal Unit. A measure of the energy required to raise the temperature of one pound of water one degree Fahrenheit.

Coal Seam. A bed or stratum of coal.

Coal Washing. The process of removing impurities, such as ash and sulfur based compounds, from coal.

Compliance Coal. Coal which, when burned, emits 1.2 pounds or less of sulfur dioxide per million Btus, which is equivalent to .72% sulfur per pound of 12,000 Btu coal. Compliance coal requires no mixing with other coals or use of sulfur dioxide reduction technologies by generators of electricity to comply with the requirements of the federal Clean Air Act.

Continuous Miner. A machine used in underground mining to cut coal from the seam and load it into conveyors or into shuttle cars in a continuous operation.

Continuous Mining. One of two major underground mining methods now used in the United States (also see Longwall Mining). This process utilizes a continuous miner. The continuous miner removes or cuts the coal from the seam. The loosened coal then falls on a conveyor for removal to a shuttle car or larger conveyor belt system.

Dragline. A large machine used in the surface mining process to remove the overburden, or layers of earth and rock, covering a coal seam. The dragline has a large bucket suspended from the end of a long boom. The bucket, which is suspended by cables, is able to scoop up great amounts of overburden as it is dragged across the excavation area.

Dragline Mining. A method of mining where large capacity draglines remove overburden to expose the coal seams.

Excavator-and-Loader Mining. A form of surface mining in which large excavators remove overburden from above the coal seam. The overburden is loaded into trucks and hauled to a valley fill or back-stacked on previously mined areas.

Highwall Mining. Highwall mining employs a large machine with a continuous miner head. The head cuts into a coal seam and discharges coal out onto waiting conveyor belts. After highwall mining is completed, the openings are reclaimed. This method of mining is usually employed to recover any additional coal left in deep overburden areas that cannot be reached economically by other types of surface mining.

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Longwall Mining. One of two major underground coal mining methods now used in the United States (see also Continuous Mining). This method employs a rotating drum, which is pulled mechanically back and forth across a face of coal that is usually several hundred feet long. The loosened coal falls onto a conveyor for removal from the mine. Longwall operations include a hydraulic roof support system that advances as mining proceeds, allowing the roof to fall in a controlled manner in areas already mined.

Low-Sulfur Coal. Coal which, when burned, emits 1.6 pounds or less of sulfur dioxide per million Btus.

Metallurgical Coal. The various grades of coal suitable for distillation into carbon in connection with the manufacture of steel. Also known as met coal.

Preparation Plant. A preparation plant is a facility for crushing, sizing and washing coal to prepare it for use by a particular customer. The washing process has the added benefit of removing some of the coal s sulfur content.

Probable Reserves. Reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling and measurement are farther apart; therefore, the degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation.

Proven Reserves. Reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well established.

Reclamation. The restoration of land and environmental values to a mining site after the coal is extracted. Reclamation operations are usually underway where the coal has already been taken from a mine, even as mining operations are taking place elsewhere at the site. The process commonly includes recontouring or shaping the land to its approximate original appearance, restoring topsoil and planting native grass and ground covers.

Recoverable Reserves. The amount of proven and probable reserves that can actually be recovered from the reserve base taking into account all mining and preparation losses involved in producing a saleable product using existing methods and under current law.

Reserves. That part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination.

Spot Market. Sales of coal under an agreement for shipments over a period of less than one year.

Steam Coal. Coal used in steam boilers to produce electricity.

Surface Mine. A mine in which the coal lies near the surface and can be extracted by removing overburden.

Tons. References to a ton mean a short or net tonne, which is equal to 2,000 pounds.

Truck-and-Loader Mining. A form of surface mining in which endloaders remove overburden from above the coal seam. The overburden is loaded into trucks and hauled to a valley fill or back-stacked on previously mined areas.

Truck-and-Shovel Mining. An open-cast method of mining that uses large shovels to remove overburden, which is used to backfill pits after coal removal.

Unassigned Reserves. Recoverable coal reserves that have not yet been designated for mining by a specific Company operation.

Underground Mine. Also known as a deep mine. Usually located several hundred feet below the earth s surface, an underground mine s coal is removed mechanically and transferred by shuttle car or conveyor to the surface.

Employees

As of March 1, 2005, the Company employed a total of approximately 4,150 persons, approximately 530 of whom were represented by the UMWA under a collective bargaining agreement that expires in 2006 and approximately 190 of whom are represented by the Scotia Employees Association.

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EXECUTIVE OFFICERS

The following is a list of the Company s executive officers, their ages and their positions and offices held with the Company during the last five years.

Bradley M. Allbritten, 47, is Vice President Marketing of the Company and has served in such capacity since August 2002. From March 2000 to February 2003, Mr. Allbritten was the Company s Vice President Human Resources. Mr. Allbritten served as the Company s Director of Human Resources from February 1999 through February 2000. From January 1995 to February 1999, Mr. Allbritten served as Human Resources Manager for Atlantic Richfield Company.

C. Henry Besten, Jr., 56, is Senior Vice President Strategic Development of the Company and has served in such capacity since December 2002. Mr. Besten is also President of the Company s Arch Energy Resources, Inc. subsidiary and has served in that capacity since July 1997. From July 1997 to December 2002, Mr. Besten served as Vice President Strategic Marketing of the Company. Mr. Besten also served as Acting Chief Financial Officer of the Company from December 1999 to November 2000.

John W. Eaves, 47, is Executive Vice President and Chief Operating Officer of the Company and has served in such capacity since December 2002. From February 2000 to December 2002, Mr. Eaves served as Senior Vice President Marketing of the Company and from September 1995 to December 2002 as President of the Company s Arch Coal Sales Company, Inc. subsidiary. Mr. Eaves also served as Vice President Marketing of the Company from July 1997 through February 2000. Mr. Eaves serves on the board of directors of ADA-ES, Inc.

Sheila B. Feldman, 50, is Vice President Human Resources of the Company and has served in such capacity since February 2003. From 1997 to February 2003, Ms. Feldman was the Vice President Human Resources and Public Affairs of Solutia Inc.

Robert G. Jones, 48, is Vice President Law, General Counsel and Secretary of the Company and has served in such capacity since March 2000. Mr. Jones served the Company as Assistant General Counsel from July 1997 through February 2000 and as Senior Counsel from August 1993 to July 1997.

Steven F. Leer, 52, is President and Chief Executive Officer and a Director of the Company and has served in such capacity since 1992.

Robert J. Messey, 59, is Senior Vice President and Chief Financial Officer of the Company and has served in such capacity since December 2000. Prior to joining Arch Coal, Mr. Messey served as vice president of financial services of Jacobs Engineering Group Inc. from January 1999 and, prior to that, served as senior vice president and chief financial officer of Sverdrup Corporation from 1992. Mr. Messey serves on the board of directors of Baldor Electric Company.

David B. Peugh, 50, is Vice President Business Development of the Company and has served in such capacity since 1993.

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ITEM 2. PROPERTIES

The Company estimates that it owned or controlled, as of December 31, 2004, approximately 3.7 billion tons of proven and probable recoverable reserves. Recoverable reserves include only saleable coal and do not include coal which would remain unextracted, such as for support pillars, and processing losses, such as washery losses. Reserve estimates are prepared by the Company s engineers and geologists and reviewed and updated periodically. Total recoverable reserve estimates and reserves dedicated to mines and complexes change from time to time to reflect mining activities, analysis of new engineering and geological data, changes in reserve holdings and other factors. The following tables present the Company s estimated assigned and unassigned recoverable coal reserves at December 31, 2004:

Total Assigned Reserves
(tonnage in millions)

	Total Assigned Recoverable Reserves	Proven	Probable	Sulfur Content (lbs. Per million Btus) <1.2	1.2-2.5	>2.5	As Received Btu per lb.(1)	Reserve Control Leased	Owned	Mining Method Surface	Underground	Past Reserve Estimates 2002	2003
Wyoming(2)	1,840	1,791	49	1,782	58		8,804	1,840		1,840		1,089	1,025
Central App	409	322	87	116	274	19	12,832	386	23	157	252	388	441
Illinois													
Utah	112	59	53	112			11,652	110	2		112	125	116
Colorado	80	59	21	79	1		11,879	77	3		80	112	85
Total	2,441	2,231	211	2,089	333	19	9,715	2,413	28	1,997	444	1,714	1,667

Total Unassigned Reserves
(tonnage in millions)

	Total Unassigned Recoverable Reserves	Proven	Probable	Sulfur Content (lbs. Per million Btus) <1.2	1.2-2.5	>2.5	As Received Btu per lb.(1)	Reserve Control Leased	Owned	Mining Method Surface	Underground
Wyoming	487	313	174	438	49		9,483	392	95	313	174
Central App	418	271	147	120	243	55	12,778	321	97	87	331
Illinois	257	187	70			257	11,325	36	221	12	245
Utah	37	17	20	29	8		11,229	37			37
Colorado	58	46	12	57	1		11,529	58			58
Total	1,257	834	423	644	301	312	11,100	844	413	412	845

(1) As received btu per lb. includes the weight of moisture in the coal on an as sold basis.

(2) Includes approximately 700 million tons of coal reserves under the Little Thunder federal coal lease for which the Company was the successful bidder in September 2004. The coal lease for the Little Thunder reserves was issued effective March 1, 2005.

As of December 31, 2004, approximately 90,000 acres out of the Company s total of approximately 658,000 acres of coal land was leased from the federal government. These leases have terms expiring between 2005 and 2024, subject to readjustment or extension and to earlier termination for failure to meet diligent development requirements. The Company has entered into leases covering substantially all of its leased reserves which are not scheduled to expire prior to expiration of projected mining activities. Royalties are paid to lessors either as a fixed-price per-ton or as a percentage of the gross sales price of the mined coal. Under current mining plans, all reported leased reserves will be mined out within the period of existing leases or within the time period of assured lease renewals.

The Company pays percentage-based royalties under the majority of its significant leases. The terms of most of these leases extend until the exhaustion of mineable and merchantable coal. The remaining leases have initial terms ranging from one to 40 years from the date of their execution, with most containing options to renew. In some cases, a lease bonus, or prepaid royalty, is required, payable either at the time of execution of the lease or in annual installments. In most cases, the prepaid royalty amount is applied to reduce future production royalties.

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The Pine Creek, Black Bear, Campbells Creek, Samples, Ruffner and Holden 25/Ragland preparation plants and related loadout facilities are located on properties held under leases which expire at varying dates over the next thirty years with either optional 20-year extensions or with unlimited extensions, and the balance of the Company s preparation plants and loadout facilities are located on property owned by the Company.

All of the identified coal reserves held by the Company s subsidiaries have been subject to preliminary coal seam analysis to test sulfur content. Of these reserves, approximately 74% consist of compliance coal while an additional 11% could be sold as low-sulfur coal. The balance is classified as high-sulfur coal. Some of the Company s low-sulfur coal can be marketed as compliance coal when blended with other compliance coal. Accordingly, most of the Company s reserves are primarily suitable for the domestic steam coal markets. However, a portion of the low-sulfur and compliance coal reserves at the Mingo Logan operation, and coal reserves at the Cumberland River and Lone Mountain operations, when blended with coal from Mingo Logan, may also be used as metallurgical coal.

Title to coal properties held by lessors or grantors to the Company and its subsidiaries and the boundaries of properties are normally verified at the time of leasing or acquisition. However, in cases involving less significant properties and consistent with industry practices, title and boundaries are not completely verified until such time as the Company s independent operating subsidiaries prepare to mine such reserves. If defects in title or boundaries of undeveloped reserves are discovered in the future, control of and the right to mine such reserves could be adversely affected.

From time to time, lessors or sublessors of land leased by the Company s subsidiaries have sought to terminate such leases on the basis that such subsidiaries have failed to comply with the financial terms of the leases or that the mining and related operations conducted by such subsidiaries are not authorized by the leases. Some of these allegations relate to leases upon which the Company conducts operations material to the Company s consolidated financial position, results of operations and liquidity, but the Company does not believe any pending claims by such lessors or sublessors have merit or will result in the termination of any material lease or sublease.

The Company leased 20,500 acres of property to other coal operators in 2004. The Company received royalty income of $4.0 million, $1.7 million, and $9.4 million in 2004, 2003 and 2002, respectively, from the mining of 2.9 million, 1.3 million tons and 6.9 million tons, respectively, on those properties. Reserves at properties leased by the Company to other coal operators are not included in the reserve figures set forth in this Annual Report.

The Company must obtain permits from applicable state regulatory authorities before it begins to mine particular reserves. Applications for permits require extensive engineering and data analysis and presentation, and must address a variety of environmental, health and safety matters associated with a proposed mining operation. These matters include the manner and sequencing of coal extraction, the storage, use and disposal of waste and other substances and other impacts on the environment, the construction of overburden fills and water containment areas, and reclamation of the area after coal extraction. The Company is required to post bonds to secure performance under its permits. As is typical in the coal industry, the Company strives to obtain mining permits within a time frame that allows it to mine reserves as planned on an uninterrupted basis. The Company generally begins preparing applications for permits for areas that it intends to mine up to three years in advance of their expected issuance date. Regulatory authorities have considerable discretion in the timing of permit issuance and the public has rights to comment on and otherwise engage in the permitting process, including through intervention in the courts.

The Company s reported coal reserves are those that could be economically and legally extracted or produced at the time of their determination. In determining whether the Company s reserves meet this standard, it takes into account, among other things, the Company s potential inability to obtain a mining permit, the possible necessity of revising a mining plan, changes in estimated future costs, changes in future cash flows caused by changes in costs required to be incurred to meet regulatory requirements and obtaining mining permits, variations in quantity and quality of coal, and varying levels of demand and their effects on selling prices. The Company has obtained, or the Company has a high probability of obtaining, all required permits or government approvals with respect to its reserves. Except as described elsewhere in this document with respect to permits to conduct mining operations involving valley fills, which has been taken into account in determining the Company s reserves, the Company is not currently aware of matters which would significantly hinder its ability to obtain future mining permits or governmental approvals with respect to its

reserves.

The Company periodically engages third parties to review its reserve estimates. The most recent third party review of the Company s reserve estimates was conducted by Weir International Mining Consultants in April 2003.

The carrying cost of the Company s coal reserves at December 31, 2004 was $1,322.2 million, consisting of $100.3 million of prepaid royalties and the $1,221.9 million net book value of coal lands and mineral rights.

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The Company s executive headquarters occupy approximately 78,000 square feet of leased space at One City Place Drive, in St. Louis, Missouri. See Item 1. Business for a further description of the Company s subsidiaries mining complexes, mines, transportation facilities and other operations. The Company s subsidiaries currently own or lease the equipment utilized in their mining operations.

ITEM 3. LEGAL PROCEEDINGS

The information required by this Item is contained in the Contingencies Legal Contingencies section of Management s Discussion and Analysis contained in the Company s 2004 Annual Report to Stockholders and is incorporated herein by reference.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

There were no matters submitted to a vote of security holders of the Company through the solicitation of proxies or otherwise during the fourth quarter of 2004.

PART II

ITEM 5. MARKET FOR REGISTRANT S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The information required by this Item is contained in the Company s 2004 Annual Report to Stockholders under the caption Corporate Governance and Stockholder Information and is incorporated herein by reference.

ITEM 6. SELECTED FINANCIAL DATA

The information required by this Item is contained in the Company s 2004 Annual Report to Stockholders under the caption Selected Financial Information , and is incorporated herein by reference.

ITEM 7. MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The information required by this Item is contained in the Company s 2004 Annual Report to Stockholders under the caption Management s Discussion and Analysis of Financial Condition and Results of Operation , and is incorporated herein by reference.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information required by this Item is contained in the Company s 2004 Annual Report to Stockholders under the caption Management s Discussion and Analysis of Financial Condition and Results of Operation , and is incorporated herein by reference.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Reference is made to Part IV, Item 14 of this Annual Report on Form 10-K for the information required by Item 8.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Reference is made to Part II, Item 8 of this Annual Report on Form 10-K for the information required by Item 9A.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

There is hereby incorporated by reference into this Annual Report on Form 10-K the information appearing under the subcaptions Nominees For a Three-Year Term That Will Expire in 2008 , Directors Whose Terms Will Expire in 2007 , and Directors Whose Terms Will Expire in 2006 which appear under the caption Election of Directors in the Company s Proxy Statement to be distributed to Company stockholders in connection with the Company s 2005 Annual Meeting (the 2005 Proxy Statement). See also the list of the Company s executive officers and related information under Executive Officers in Part I, Item 1 herein.

ITEM 11. EXECUTIVE COMPENSATION

There is hereby incorporated by reference into this Annual Report on Form 10-K the information appearing in the Summary Compensation Table , the sections entitled Stock Option Grants , Performance Unit Awards , Performance Contingent Phantom Stock Awards , Stock Option Exercises and Year-End Values , and the Pension Plan section (including the table therein), the Employment Agreements section, and the Compensation of Directors section in the 2005 Proxy Statement. No portion of the Personnel and Compensation Committee Report on Executive Compensation for 2004 or the Arch Coal Performance Graph is incorporated herein in reliance on Regulation S-K, Item 402(a)(8).

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

There is hereby incorporated by reference into this Annual Report on Form 10-K the information appearing under the caption Ownership of Arch Coal Common Stock in the 2005 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

None.

ITEM 14. PRINCIPAL ACCOUNTANTS FEES AND SERVICES

There is hereby incorporated by reference into this Annual Report on Form 10-K the information appearing under the caption Audit Committee Report in the 2005 Proxy Statement.

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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) The following consolidated financial statements of Arch Coal, Inc. and subsidiaries included in the Company s 2004 Annual Report to Stockholders are incorporated by reference:

Consolidated Statements of Operations Years Ended December 31, 2004, 2003 and 2002

Consolidated Balance Sheets December 31, 2004 and 2003

Consolidated Statements of Stockholders Equity Years Ended December 31, 2004, 2003 and 2002

Consolidated Statements of Cash Flows Years Ended December 31, 2004, 2003 and 2002

Notes to Consolidated Financial Statements

(a)(2) The following consolidated financial statement schedule of Arch Coal, Inc. and subsidiaries is included in Item 14 at the page indicated:

II Valuation and Qualifying Accounts at page .

All other schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted

(a)(3) Exhibits filed as part of this Report are as follows:

3.1 Restated Certificate of Incorporation of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.1 of the Company s Quarterly Report on Form 10-Q for the Quarter Ended March 31, 2000)

3.2 Restated and Amended Bylaws of Arch Coal, Inc. (incorporated herein by reference to the Company s Annual Report on Form 10-K for the Year Ended December 31, 2000)

4.1 Form of Rights Agreement, dated March 3, 2000 (incorporated herein by reference to Exhibit 1 to a current report on Form 8-A filed on March 9, 2000)

4.2 Description of Indenture pursuant to Shelf Registration Statement (incorporated herein by reference to the Company s Registration Statement on Form S-3 (Registration No. 333-58738) filed on April 11, 2001)

4.3 Certificate of Designations Establishing the Designations, Powers, Preferences, Rights, Qualifications, Limitations and Restrictions of the Company s 5% Perpetual Cumulative Convertible Preferred Stock (incorporated herein by reference to Exhibit 3 to current report on Form 8-A filed on March 5, 2003)

4.4	Indenture, dated as of June 25, 2003, by and among Arch Western Finance, LLC, the Company, Arch Western Resources, LLC, Arch of Wyoming, LLC, Mountain Coal Company, L.L.C., Thunder Basin Coal Company, L.L.C. and The Bank of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Form S-4 of Arch Western Finance, LLC (Reg. No. 333-107569))
4.5	Credit Agreement, dated as of December 22, 2004, by and among Arch Coal, Inc., the Banks party thereto, PNC Bank, National Association, as administrative agent, Citicorp USA, Inc., JPMorgan Chase Bank, N.A., and Wachovia Bank, National Association, as co-syndication agents, and Fleet National Bank, as documentation agent (incorporated by reference to Exhibit 99.1 to the Company s Current Report on Form 8-K filed on December 28, 2004).
10.1	Amended and Restated Retention Agreement between Arch Coal, Inc. and Steven F. Leer, dated October 1, 2004 (filed herewith)
10.2	Form of Retention Agreement between Arch Coal, Inc. and each of its Executive Officers (other than its Chief Executive Officer) (filed herewith)

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10.3	Deed of Lease and Agreement between Dingess-Rum Coal Company and Amherst Coal Company (predecessor to Ark Land Company), dated June 1, 1962, as supplemented January 1, 1968, June 1, 1973, July 1, 1974 and November 12, 1987; Lease Exchange Agreement dated July 2, 1979 amended as of January 1, 1984, January 7, 1993 and February 24, 1993; Partial Release dated as of May 6, 1988; Assignments dated March 15, 1990 and October 5, 1990 (incorporated herein by reference to Exhibit 10.8 of the Company s Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
10.4	Agreement of Lease by and between Shonk Land Company, Limited Partnership and Lawson Hamilton (predecessor to Ark Land Company), dated February 8, 1983, as amended October 7, 1987, March 9, 1989, April 1, 1992, October 31, 1992, December 5, 1992, February 16, 1993, August 4, 1994, October 1, 1995, July 31, 1996 and November 27, 1996 (incorporated herein by reference to Exhibit 10.9 of the Company s Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
10.5	Lease between Little Coal Land Company and Ashland Land & Development Co., a wholly-owned subsidiary of Ashland Coal, Inc. which was merged into Allegheny Land Company, a second tier subsidiary of the Company (incorporated herein by reference to Exhibit 10.11 of a Post-Effective Amendment No. 1 to a Registration Statement on Form S-1 (Registration No.33-22425), as amended, filed by Ashland Coal, Inc., a subsidiary of the Company, on August 11, 1988)
10.6	Agreement of Lease dated January 1, 1988, between Courtney Company and Allegheny Land Company (legal successor by merger with Allegheny Land Co. No. 2, the assignee of Primeacre Land Corporation under October 5, 1992, assignments), a second-tier subsidiary of the Company (incorporated herein by reference to Exhibit 10.3 to the Annual Report on Form 10-K for the Year Ended December 31, 1995, filed by Ashland Coal, Inc., a subsidiary of the Company)
10.7	Lease between Dickinson Properties, Inc., the Southern Land Company, and F. B. Nutter, Jr. and F. B. Nutter, Sr., predecessors in interest to Hobet Mining & Construction Co., Inc., an independent operating subsidiary of the Company that subsequently changed its name to Hobet Mining, Inc. (incorporated herein by reference to Exhibit 10.14 of a Post-Effective Amendment No. 1 to a Registration Statement on Form S-1 (Registration No. 33-22425), as Amended, filed by Ashland Coal, Inc., a subsidiary of the Company, on August 11, 1988)
10.8	Lease Agreement between Fielden B. Nutter, Dorothy Nutter and Hobet Mining & Construction Co., Inc., an independent operating subsidiary of the Company that Subsequently changed its name to Hobet Mining, Inc. (incorporated herein by reference to Exhibit 10.22 of a Post-Effective Amendment No. 1 to a Registration Statement on Form S-1 (Registration No. 33-22425), as amended, filed by Ashland Coal, Inc., a subsidiary of the Company, on August 11, 1988)
10.9	Lease and Modification Agreement between Horse Creek Coal Land Company, Ashland and Hobet Mining & Construction Co., Inc., an independent operating subsidiary of the Company that subsequently changed its name to Hobet Mining, Inc. (incorporated herein by reference to Exhibit 10.24 of a Post-Effective Amendment No. 1 to a Registration Statement on Form S-1 (Registration

	No. 33-22425), as amended, filed by Ashland Coal, Inc., a subsidiary of the Company, on August 11, 1988)
10.10	Lease Agreement between C. C. Lewis Heirs Limited Partnership and Allegheny Land Company, a second-tier subsidiary of the Company (incorporated herein by reference to Exhibit 10.25 of a Post-Effective Amendment No 1 to a Registration Statement on Form S-1 (Registration No.33-22425), as amended, filed by Ashland Coal, Inc., a subsidiary of the Company, on August 11, 1988)
10.11	Sublease between F. B. Nutter, Sr., et al., and Hobet Mining & Construction Co., Inc., an independent operating subsidiary of the Company that subsequently changed its name to Hobet Mining, Inc. (incorporated herein by reference to Exhibit 10.27 of a Post-Effective Amendment No. 1 to a Registration Statement on Form S-1 (Registration No. 33-22425), as amended, filed by Ashland Coal, Inc., a subsidiary of the Company, on August 11, 1988)

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10.12	Coal Lease Agreement dated as of March 31, 1992, among Hobet Mining, Inc. (successor by merger with Dal-Tex Coal Corporation) as lessee and UAC and Phoenix Coal Corporation, as lessors, and related Company Guarantee (incorporated herein by reference to a Current Report on Form 8-K dated April 6, 1992 filed by Ashland Coal, Inc., a subsidiary of the Company)
10.13	Lease dated as of October 1, 1987, between Pocahontas Land Corporation and Mingo Logan Collieries Company whose name is now Mingo Logan Coal Company (incorporated herein by reference to Exhibit 10.3 to Amendment No. 1 to a Current Report on Form 8-K filed on February 14, 1990 by Ashland Coal, Inc., a subsidiary of the Company)
10.14	Consent, Assignment of Lease and Guaranty dated January 24, 1990, among Pocahontas Land Corporation, Mingo Logan Coal Company, Mountain Gem Land, Inc. and Ashland Coal, Inc. (incorporated herein by reference to Exhibit 10.4 to Amendment No. 1 to a Current Report on Form 8-K filed on February 14, 1990 by Ashland Coal, Inc., a subsidiary of the Company)
10.15	Federal Coal Lease dated as of June 24, 1993 between the United States Department of the Interior and Southern Utah Fuel Company (incorporated herein by reference to Exhibit 10.17 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.16	Federal Coal Lease between the United States Department of the Interior and Utah Fuel Company (incorporated herein by reference to Exhibit 10.18 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.17	Federal Coal Lease dated as of July 19, 1997 between the United States Department of the Interior and Canyon Fuel Company, LLC (incorporated herein by reference to Exhibit 10.19 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.18	Federal Coal Lease dated as of January 24, 1996 between the United States Department of the Interior and the Thunder Basin Coal Company (incorporated herein by reference to Exhibit 10.20 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.19	Federal Coal Lease Readjustment dated as of November 1, 1967 between the United States Department of the Interior and the Thunder Basin Coal Company (incorporated herein by reference to Exhibit 10.21 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.20	Federal Coal Lease effective as of May 1, 1995 between the United States Department of the Interior and Mountain Coal Company (incorporated herein by reference to Exhibit 10.22 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.21	Federal Coal Lease dated as of January 1, 1999 between the Department of the Interior and Ark Land Company (incorporated herein by reference to Exhibit 10.23 of the Company s Annual Report on Form 10-K for the Year

	Ended December 31, 1998)
10.22	Federal Coal Lease dated as of October 1, 1999 between the United States Department of the Interior and Canyon Fuel Company, LLC (incorporated herein by reference to Exhibit 10 of the Company s Quarterly Report on Form 10-Q for the Quarter Ended September 30, 1999)
10.23	Federal Coal Lease effective as of March 1, 2005 by and between the United States of America and Ark Land LT, Inc. covering the tract of land known as Little Thunder in Campbell County, Wyoming (incorporated by reference to Exhibit 99.1 to the Company s Current Report on Form 8-K filed on February 10, 2005)
10.24	Modified Coal Lease (WYW71692) executed January 1, 2003 by and between the United States of America, through the Bureau of Land Management, as lessor, and Triton Coal Company, LLC, as lessee covering a tract of land known as North Rochelle in Campbell County, Wyoming (filed herewith).
10.25	Coal Lease (WYW71692) executed January 1, 1998 by and between the United States of America, through the Bureau of Land Management, as lessor, and Triton Coal Company, LLC, as lessee covering a tract of land known as North Roundup in Campbell County, Wyoming (filed herewith).
10.26	Form of Indemnity Agreement between Arch Coal, Inc. and Indemnitee (as defined therein) (incorporated herein by reference to Exhibit 10.15 of the Company s Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)

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10.27	Arch Coal, Inc. Incentive Compensation Plan For Executive Officers (incorporated herein by reference to Exhibit 99.1 of the Company s Current Report on Form 8-K filed on February 28, 2005.
10.28	Arch Coal, Inc. (formerly Arch Mineral Corporation) Deferred Compensation Plan (incorporated herein by reference to Exhibit 4.1 of the Company s Registration Statement on Form S-8 (Registration No. 333-68131) filed on December 1, 1998)
10.29	Arch Coal, Inc. 1997 Stock Incentive Plan (as Amended and Restated on February 28, 2002) (incorporated herein by reference to Exhibit 10.1 to the Company s Quarterly Report on Form 10-Q for the Quarter Ended March 31, 2002)
10.30	Arch Mineral Corporation 1996 ERISA Forfeiture Plan (incorporated herein by reference to Exhibit 10.20 to the Company s Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
10.31	Arch Coal, Inc. Outside Directors Deferred Compensation Plan effective January 1, 1999 (incorporated herein by reference to Exhibit 10.30 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
10.32	Second Amendment to the Arch Mineral Corporation Supplemental Retirement Plan effective January 1, 1998(incorporated herein by reference to Exhibit 10.31 of the Company s Annual Report on Form 10-K for the Year Ended December 31, 1998)
13	Portions of the Company s Annual Report to Stockholders for the year ended December 31, 2004 (filed herewith)
21	Subsidiaries of the Company (filed herewith)
23.1	Consent of Ernst & Young LLP (filed herewith)
24	Power of Attorney (filed herewith)
31.1	Rule 13a-14(a)/15d-14(a) Certification of Steven F. Leer (filed herewith)
31.2	Rule 13a-14(a)/15d-14(a) Certification of Robert J. Messey (filed herewith)
32.1	Section 1350 Certification of Steven F. Leer (filed herewith)
32.2	Section 1350 Certification of Robert J. Messey (filed herewith)

* Exhibits 10.27, 10.28, 10.29, 10.30 and 10.32 are executive compensation plans.

Upon written or oral request to the Company s Secretary, a copy of any of the above exhibits will be furnished at cost.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Arch Coal, Inc.
(Registrant)
By: /s/ Steven F. Leer

Steven F. Leer
President and Chief Executive Officer

Date: March 10, 2005

Signatures	Capacity
/s/ Steven F. Leer Steven F. Leer	President and Chief Executive Officer and Director
/s/ Robert J. Messey Robert J. Messey	Senior Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ John W. Lorson John W. Lorson	Controller
* James R. Boyd	Director
* Frank M. Burke	Director
* Patricia Fry Godley	Director
* Douglas H. Hunt	Director
* Thomas A. Lockhart	Director
* A. Michael Perry	Director

	Robert G. Potter	
	*	Director
	Theodore D. Sands	
*By:	/s/ Robert G. Jones	
	Robert G. Jones As Attorney-in-fact	

ORIGINAL POWERS OF ATTORNEY AUTHORIZING STEVEN F. LEER AND ROBERT G. JONES, AND EACH OF THEM, TO SIGN THIS ANNUAL REPORT ON FORM 10-K AND ANY FURTHER AMENDMENTS THERETO ON BEHALF OF THE ABOVE-NAMED PERSONS HAVE BEEN WITH THE SECURITIES AND EXCHANGE COMMISSION AS EXHIBIT 24 TO THIS REPORT ON FORM 10-K.

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SCHEDULE II

ARCH COAL, INC. AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS
(in thousands)

	BALANCE AT BEGINNING OF YEAR	ADDITIONS CHARGED TO COSTS AND EXPENSES	CHARGED TO OTHER ACCOUNTS	DEDUCTIONS(1)	BALANCE AT END OF YEAR
Year Ended December 31, 2004					
Reserves deducted from Asset Accounts					
Other Assets Other Notes and Accounts Receivable	$ 1,469	$ 570	$ 962(2)	$	$ 3,001
Current Assets Supplies Inventory	18,763	1,746	3,010(2)	543	22,976
Deferred Income Taxes	161,113		2,157(3)	265	163,005
Year Ended December 31, 2003					
Reserves deducted from Asset Accounts					
Other Assets Other Notes and Accounts Receivable	3,894	1,315		3,740(5)	1,469
Current Assets Supplies Inventory	17,515	1,583		335	18,763
Deferred Income Taxes	145,603	3,543	11,967(4)		161,113
Year Ended December 31, 2002					
Reserves deducted from Asset Accounts					
Other Assets Other Notes and Accounts Receivable	544	3,409		59	3,894
Current Assets Supplies Inventory	16,598	1,831		914	17,515
Deferred Income Taxes	119,723	25,880			145,603

(1) Reserves utilized, unless otherwise indicated.

(2) Balance at acquisition date of subsidiaries.

(3) Amount represents the valuation allowance for tax benefits from the exercise of employee stock options. The benefit, net of valuation allowance, was recorded as paid-in capital.

(4) Amount represents state net operating loss carryforwards identified in 2003 which were fully reserved.

(5) Amount includes $1.6 million that was recognized as income upon collection of the related receivable.