
 SECURITIES AND EXCHANGE COMMISSION
 WASHINGTON, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED: DECEMBER 31, 1998 COMMISSION FILE NUMBER: 1-13105

ARCH COAL, INC.
 (EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE
 (State or other jurisdiction of
 incorporation or organization)

43-0921172
 (IRS Employer
 Identification No.)

CITYPLACE ONE, SUITE 300, ST. LOUIS, MO
 (Address of principal executive offices)

63141
 (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
 (Title of each class)

NEW YORK STOCK EXCHANGE
 (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 No

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 any amendment to this form 10-K.

At February 26, 1999, 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 \$138,166,273. In determining this figure, 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 February 26, 1999, there were 38,667,981 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 March 12, 1999 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, 1998 are incorporated by reference into Parts 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 the second largest coal producer in the United States. The Company mines, processes and markets primarily compliance and low-sulfur coal from 40 surface, underground and auger mines located in western, central Appalachian, and midwestern United States coal fields. Compliance and low-sulfur coal are types of coal that, when burned, emit 1.2 pounds and 1.6 pounds or less of sulfur dioxide per million Btu, respectively. As of December 31, 1998, the Company controlled approximately 3.7 billion tons of measured and indicated coal reserves, of which approximately 1.9 billion tons were located in coal fields in the western United States, 1.4 billion tons were located in coal fields in central Appalachia, and the remainder in midwestern coal fields.

On June 1, 1998, Arch Western Resources, LLC ("Arch Western"), in which the Company owns a 99% membership interest, acquired the United States coal operations of Atlantic Richfield Company (the "Arch Western transaction"). The principal operating units of Arch Western are Thunder Basin Coal Company, L.L.C., which operates the Black Thunder and Coal Creek mines 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 operates two coal mines in the Carbon Basin of Wyoming. Arch Western owns a 65% membership interest in Canyon Fuel, with the remaining 35% membership interest owned by a subsidiary of ITOCHU Corporation of Japan.

The Company and its operating subsidiaries (but not including Canyon Fuel as Arch Coal accounts for its interest in Canyon Fuel using the equity method) sold approximately 81.1 million tons of coal in 1998, 75.8 million tons of which were produced by the Company and the balance of which was purchased for resale. Approximately 76% of this tonnage was sold under long-term contracts (contracts having a term greater than one year) and the balance was sold on the spot market (contracts having a term of one year or less). Approximately 78% of 1998 total revenues were derived from sales of coal under long-term contracts. Sales of metallurgical coal in 1998 totaled 2.8 million tons, or approximately 5% of the Company's 1998 coal sales. In 1998, sales of coal in the export market totaled approximately 3.7 million tons. Sales of steam coal accounted for approximately 60% of these export sales, while the balance of export sales consisted of sales of metallurgical coal.

RECENT DEVELOPMENTS

The Company previously announced that during 1999 it will consider divestiture of non-core and under-performing assets. In this regard, on March 2, 1999, the Company announced its intention to explore the potential disposition of its Coal-Mac (Kentucky), Lone Mountain and Pardee mining operations. These operations collectively contributed approximately 9.7% and 1% of the Company's total revenues and operating profit, respectively, for 1998. For additional information relating to these mining operations, see the information contained in the table on page 6. The Company intends to use the proceeds of any disposition to reduce debt, fund purchases under the Company's share repurchase program and to fund capital expenditures at its other operations. The Company anticipates that the disposition of these operations would be consummated prior to the end of the year; however, there can be no assurance as to when, if at all, these operations will be sold or at what price.

On February 3, 1999, the United States District Court for the Southern District of West Virginia entered a temporary restraining order enjoining the U.S. Army Corps of Engineers from issuing a Section 404 permit needed for a new area at the Company's Dal-Tex mine. The temporary restraining order was subsequently extended until March 5, 1999. At the time the temporary restraining order was first entered, the court also began hearings on a motion for a preliminary injunction. The hearing concluded on February 26, 1999 and the Company expects a ruling on the preliminary injunction motion prior to the expiration of the temporary restraining order. See Item 3. "Legal Proceedings".

On January 20, 1999, Canyon Fuel amended the coal supply agreements pursuant to which it supplied coal to the Intermountain Power Agency's Intermountain Power Project ("IPA"). Pursuant to the amended coal supply agreements, Canyon Fuel will supply coal to IPA through 2010 with a mutual option to extend to 2015 at a rate of approximately 2.2 million tons per year. Canyon Fuel and IPA settled a pending arbitration and related litigation resulting from IPA's assertion of a gross inequity under the coal supply contracts and disagreements over the price escalation provisions of the contracts. As part of the settlement, IPA agreed to pay to Canyon Fuel \$12.7 million which had been withheld due to the dispute. The members of Canyon Fuel also agreed to terminate certain indemnification rights, including indemnification rights relating to the IPA coal supply agreements, arising in connection with the December 1996 acquisition of Canyon Fuel from The Coastal Corporation, and the Company agreed to terminate certain indemnification rights relating to the IPA coal supply agreements under agreements relating to the Arch Western transaction. In the aggregate the Company will receive \$29.9 million over three years for termination of the indemnity rights. The proceeds from the termination of the indemnity rights will be used to repay debt and for other corporate purposes. This transaction will be accounted for in connection with the purchase price accounting for the Arch Western transaction and, therefore, no gain or loss will be recognized.

BUSINESS ENVIRONMENT

Demand for Coal. Production of coal in the United States has increased almost three-fold since 1960 and today, coal generates 57% of the electricity consumed in the United States. This represents a 24% increase in market share over competing energy sources during the last 20 years. Coal attained this market share because of its relatively low cost and its availability throughout the United States. On an average, all-in cost per megawatt-hour ("MWh") basis, coal-fired generation is substantially less expensive than electricity generated from natural gas, oil or nuclear power. Hydroelectric power is inexpensive but is limited geographically and there are few suitable sites for new hydroelectric power dams. Consequently, in recent years nearly 90% of domestic coal production has been consumed by electric utilities. 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 alternative fuels (natural gas, oil and nuclear) and alternative energy sources (hydroelectric).

Long-term demand for electric power will depend on a variety of economic, regulatory, technological and climatic factors beyond the Company's control. Historically, domestic demand for electric power has generally increased as the U.S. economy has grown. Recently, two important regulatory initiatives, one designed to increase competition among utilities and lower the cost of electricity for consumers (see "Electricity Utility Deregulation," below), and another to improve air quality by reducing the level of sulfur emitted from coal-burning power generation plants (see "Clean Air Act Amendments," below), have had and are expected to continue to have significant effects on the electric utility industry and its coal suppliers.

Electric Utility Deregulation. Electric utility deregulation is expected to cause utilities to focus even more on minimizing their fuel costs and has caused electric utilities to be more aggressive in negotiating prices with coal suppliers and to be more willing to switch to alternative coals. To the extent utility deregulation affects the Company's customers, the Company believes some aspects of deregulation may adversely affect the Company's business and operating results while other aspects of deregulation may have a positive effect. Deregulation should result in increased utilization of low cost coal-fired generating plants, but at the same time there will be increased price pressure on coal producers since fuel costs account for a high percentage of the cost of operating a generating plant.

Clean Air Act Amendments. A major regulatory change affecting the coal industry is Title IV of the Clean Air Act Amendments (the "Amendments") enacted in 1990. The Amendments have had, and will continue to have, a significant effect on the domestic coal industry. In general, Phase I of the Amendments, which became effective in 1995, regulates the level of emissions of sulfur dioxide from power plants and targets the highest sulfur dioxide emitters. Phase II, to be implemented in 2000, will extend the restrictions of the Amendments to all power plants of greater than 75 megawatt capacity. The Amendments do not define allowable emission levels on a per plant basis, but instead allocate emission allowances to the affected plants

and allow the emission allowances to be traded so that market participants can fashion more efficient and flexible compliance strategies. The emission allowance allocations for Phase I units were based on 2.5 pounds of sulfur dioxide per million Btus and Phase II allocations will be based on 1.2 pounds of sulfur dioxide per million Btus.

It was generally anticipated that Phase I of the Amendments would increase prices for low-sulfur coal. This effect did not materialize, primarily because of increased investment in low-sulfur production capacity and related transportation facilities in the western United States, and to a lesser degree in central Appalachia, in reaction to the anticipated price increase. When the Amendments were enacted, many plants switched to low-sulfur coal supplied from the Powder River Basin, located predominantly in Wyoming. This compliance strategy generated an unexpectedly large number of emission allowances. Some of these emission allowances were marketed together with higher sulfur coal and sold in competition with lower-sulfur production. The Company believes that these factors reduced or capped the anticipated price increase for low-sulfur coal in Phase I.

The Company believes that a price premium for low-sulfur coal is more likely to develop during Phase II because additional coal-burning electric power plants will be affected by Phase II. However, this price premium is not expected to develop until well into Phase II, after the large bank of Phase I emissions allowances has been reduced and before utilities electing to comply with Phase II by installing so-called "scrubber" sulfur-reduction technologies are able to implement this compliance strategy. The Company does not believe that compliance strategies utilizing scrubbers will result in significant downward pressure on compliance coal prices during initial phases of Phase II. However, if the prices of compliance coal and/or emission allowances rise, scrubber compliance strategies may become more competitive. The expected reduction of the existing bank of emission allowances during Phase II should also help to rationalize the market for compliance coal in the long term to the extent utilities are unable to utilize strategies to create a new bank of emission allowances.

Industry Competition, Market Prices and the Cost of Production. Even assuming that Clean Air Act Phase II requirements and electric utility deregulation will strengthen demand for low-sulfur coal, the Company still faces substantial competition from other coal producers with excess supply. The coal industry has historically been prone to oversupply situations as there have been few barriers to entry. At the same time, profit margins from remaining above-market contracts, coupled with high exit costs in the form of environmental and employee-related liabilities, have encouraged the perpetuation of marginal operations.

The price at which the Company's production can be sold is dependent upon many factors, many of which are beyond the Company's control. The Company sells coal under long-term contracts and on the spot market. Generally, the relative competitiveness of coal vis-a-vis other fuels or other coals is evaluated on a delivered cost per heating value unit basis. See "Sales and Marketing." In addition to competition from other fuels, coal quality, the marginal cost of producing coal in various regions of the country and transportation cost are major determinants of the price for which the Company's production can be sold. Coal production costs vary widely depending upon the region in which the coal is produced. Factors that directly influence production cost, include geological characteristics (including seam thickness), overburden ratios, depth of underground reserves and transportation costs. Western coal is relatively inexpensive to mine because the seams are thick and typically close to the surface. As a result, open-cast mining methods are used. The large capital costs associated with dragline mining and truck and shovel mining are amortized over a relatively large amount of coal produced. Western mines are also highly productive and labor is a much smaller component of the cost structure. Eastern coal is more expensive to mine than western coal because there is a high percentage of underground coal in the east and eastern surface coal tends to have thinner coal seams. Additionally, underground mining has higher labor (including reserves for future costs associated with labor benefits and health care) and capital (including modern mining equipment and construction of extensive ventilation systems) costs than those of surface mining. In recent years, increased development of large surface mining operations, particularly in the western United States, and more efficient mining equipment and techniques, have contributed to the excess coal production capacity in the United States. Competition resulting from excess capacity encourages producers to reduce prices and to pass productivity gains through to customers.

The lower production cost in the western mines is offset somewhat by the higher quality of many eastern coals and higher transportation cost to many coal-fired power plants in the country.

Demand for the Company's low-sulfur coal and the prices that the Company will be able to obtain for it will also be affected by the price and availability of high-sulfur coal, which can be marketed in tandem with emissions allowances. Intraregional and interregional competition is keen as producers seek to position themselves as the low-cost producer and supplier of high-demand product to electric power utilities.

Transportation of Coal. Transportation costs are another fundamental factor affecting coal industry competition, particularly interregional competition. Nearly 80% of coal deliveries to utilities are made by rail. Coordination of the many eastern loadouts, the large number of small shipments, terrain and labor issues all combine to make shipments originating in the eastern United States inherently more expensive on a per-mile basis than shipments originating in the western United States. Historically, coal transportation rates from the Powder River Basin into central Appalachian markets limited the use of Powder River Basin coal in those markets. More recently, lower rail rates from the Powder River Basin to markets served by eastern producers have created major competitive challenges for eastern producers.

Barge transportation is the lowest-cost method of transporting coal long distances in the eastern United States and the large numbers of eastern producers with river access keep coal prices very competitive for river shipments. The Company believes that many utilities with plants located on the Ohio River system are well positioned for deregulation as competition for river shipments should remain high for central Appalachian coal. With close proximity to competitively-priced central Appalachian coal and the ability to receive western coals, the Company believes utilities with plants located on the Ohio River system will become price setters in a deregulated environment. The ability of these utilities to blend western and eastern coals will also create a new, dynamic fuel procurement environment that could place western and eastern coals in even greater competition and limit rail price premiums. River transport is an important transportation option not available to Powder River Basin producers between Wyoming and midwestern river terminals.

Railroads move more coal than any other commodity, and in 1996 coal accounted for 22% of total U.S. rail freight revenue and 44% of total freight tonnage. Most coal mines are served by a single rail company, but much of the Powder River Basin mines are served by two competing rail carriers. Rail competition in this producing region is important, since rail costs constitute up to 75% of the delivered cost of Powder River Basin coal in remote markets.

Although undergoing significant consolidation, the coal industry in the United States remains highly fragmented. There can be no assurance that the Company's costs will permit it to compete effectively with other producers seeking to provide coal to a customer. To prosper in the business environment described above, a coal producer must be able to maintain low production costs, offer a variety of products and have access to multiple transportation systems.

SALES AND MARKETING

The Company sells coal under long-term contracts (contracts having a term of greater than 12 months) as well as on a current market, or spot, basis. When the Company's coal sales contracts expire, the Company is exposed to the risk of having to sell coal into the spot market, where demand is variable and prices are therefore subject to greater volatility. Historically, the price of coal sold pursuant to contracts exceeded then prevailing spot prices for coal. However, in the past several years new contracts have been priced at or near existing spot rates.

The terms of coal sales contracts result from bidding and extensive negotiations with customers. Consequently, the terms of such contracts vary significantly in many respects, including price adjustment features, price reopener terms, coal quality requirements, quantity parameters, flexibility and adjustment mechanisms, permitted sources of supply, treatment of environmental constraints, options to extend, and force majeure, termination and assignment provisions.

Frequently, base prices are set at the beginning of the term of a contract and are then adjusted at intervals for changes due to inflation or deflation and, in many cases, changes in costs such as taxes, reclamation fees,

black lung charges and royalties. The inflation or deflation adjustments are measured by public indices, the most common of which is the implicit price deflator for the gross domestic product as published by the United States Department of Commerce. The base price is also often adjusted to a market price which is either negotiated or determined in a predetermined manner when there is a price reopener.

Price reopeners are present in many of the more recently executed long-term contracts and usually occur periodically midway through the term of a contract. Reopeners typically allow the contract price to be renegotiated in order to be in line with the then-prevailing market price. In some circumstances, customers have the option to terminate the contract if the parties do not agree on a new price. The length of sales contracts has decreased significantly over the last few years as electricity generators have prepared for federal Clean Air Act requirements and the impending deregulation of their industry.

Quality and volumes for the coal are stipulated in coal sales contracts, although customers normally have the option to vary volume to some limited extent. Variations in the quality and volumes of coal may lead to adjustments in the contract price. Coal sales contracts typically stipulate procedures for quality control, sampling and weighing.

Contract provisions in some cases specify how coal will be supplied in the event of a force majeure, including such events as strikes, adverse mining conditions, serious transportation problems or, in certain instances, changes in laws. More recent contracts stipulate that this tonnage can be made up by mutual agreement or at the discretion of the customer. Coal sales contracts typically contain termination clauses if either party fails to comply with the terms and conditions of the contract.

In certain contracts, the Company has a right of substitution, allowing it to provide coal from different mines as long as it is of a certain specified quality and will be sold at the same delivered cost.

There are certain contracting terms that differ between a standard "eastern U.S." contract and a standard "western U.S." contract. In the eastern United States, many customers require that the coal be sampled and weighed at the destination whereas in the western United States samples are still taken at the source. More eastern United States coal is purchased on the spot market. The eastern United States market has traditionally been a more short-term market because of the larger number of smaller mining operations in that region. Western U.S. contracts normally stipulate that certain production taxes and coal royalties be reimbursed in full by the buyer rather than being a pricing component within the contract. These items are a significant portion of western U.S. coal pricing.

Another factor that may impact the sale of coal in the future is the development of coal commodity trading. The New York Mercantile Exchange initiated electricity commodity trading a few years ago and has been developing standards for coal contracts. It has announced its intention to initiate coal contract trading in the summer of 1999, based on a Huntington, West Virginia hub. The development of the standards to determine price has been difficult because of the non-homogeneous character of coal and diversity in mining locations, conditions and operations. Nonetheless, in anticipation of commodity trading, some brokerage and marketing firms have entered the coal markets and devised transactions that mimic commodity activity. The financial markets will provide sellers and buyers with more commonly used hedging tools such as put and call options. The trend to more commodity type transactions could mark a significant change in how coal is sold. It is too early to determine whether this trend will have a material effect on the Company and its operating results.

RELIANCE ON MAJOR CUSTOMERS

The Company's total sales to American Electric Power Company, Inc. ("AEP") and Southern Company and their respective affiliates accounted for approximately 13.0% and 11.3%, respectively, of the Company's total revenues in 1998. AEP and Southern Company and/or their affiliates each currently has multiple long-term contracts with the Company. If the Company experienced an unanticipated and immediate loss of all of the contracts with either of these customers, the loss could have a material adverse effect on the Company's business and results of operations.

OPERATIONS

As of December 31, 1998, the Company operated a total of 40 mining complexes, all located in the United States. 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. The following table provides the location and a summary of information regarding the Company's principal mining complexes and the coal reserves associated with these operations as of December 31, 1998:

MINING COMPLEX (LOCATION)	CAPTIVE MINE(S)*	CONTRACT MINE(S)*	MINING EQUIPMENT(1)	TRANSPORTATION	TONS PRODUCED IN 1998(2) (IN MILLIONS)	RECOVERABLE RESERVES (IN MILLIONS)	COST(3)/BOOK VALUE (IN MILLIONS)
CENTRAL APPALACHIA							
Mingo Logan (WV).....	S(2), U	U(4), S(3)	L, LW, C	NS	11.0	32.5	\$119/\$83
Coal-Mac (KY).....	S(3)	--	L	CSX	1.5	7.2	21/13
Dal-Tex (WV).....	S, U	--	D, L, S, CM(4)	CSX	4.6	86.5	60/48
Hobet 21 (WV).....	S, U	U(2)	D, L, S(5)	CSX	4.1	94.0	77/63
Arch of West Virginia (WV).....	S(2)	--	D, L, S(6)	CSX	5.5	24.3	130/34
Samples (WV).....	S	--	D, L, S(7)	barge, CSX	4.9	33.1	92/45
Campbells Creek (WV)....	--	U(2)	--	barge	.9	12.8	5/1
Lone Mountain (KY).....	U(2)	--	C	NS	2.4	63.1	83/40
Pardee (VA).....	S, U	U	L, C	NS	1.4	11.0	33/14
WESTERN UNITED STATES							
Black Thunder (WV).....	S	--	D, S(8)	UP, BN	24.7	1,129.0	171/164
Coal Creek (WY).....	--	S	--	UP, BN	4.4	268.6	44/42
West Elk (CO).....	U	--	LW, C	UP	3.9	145.2	81/73
Skyline (UT).....	U	--	LW, C	UP	2.4	72.2	(9)
SUFCO (UT).....	U	--	LW, C	UP	3.7	81.2	(9)
Dugout Canyon (UT).....	U	--	C(10)	UP	.2	54.7	(9)
Arch of Wyoming (WY)....	S(2)	--	D, S(11)	UP	1.3	1.5	60/4
MIDWESTERN UNITED STATES							
Arch of Illinois (IL)...	U	--	C	UP, IC	3.5(12)	22.4	168/10

S	=	Surface Mine	D	=	Dragline	UP	=	Union Pacific Railroad
U	=	Underground Mine	L	=	Loader/Truck	IC	=	Illinois Central Railroad
			S	=	Shovel/Truck	BN	=	Burlington Northern Railroad
			LW	=	Longwall	NS	=	Norfolk Southern Railroad
			C	=	Continuous Miner			

* Multiple captive and contract mines are included in parentheses.

- (1) Reported for captive operations only.
- (2) Represents seven months production for the mines acquired in the Arch Western transaction, including Black Thunder, Coal Creek, West Elk, Skyline, SUFCO and Dugout Canyon. Skyline, SUFCO and Dugout Canyon are mines operated by Canyon Fuel; production represents 100% for these facilities.
- (3) Reflects purchase accounting adjustments.
- (4) Utilizes an 80-yard dragline and two 51-cubic-yard shovels.
- (5) Utilizes an 83-cubic-yard dragline and a 51-cubic-yard shovel.
- (6) Utilizes a 49-cubic-yard dragline, a 43-cubic-yard shovel, a 22-cubic-yard shovel and a 28-cubic-yard loader at the Ruffner Mine, and a 53-cubic-yard shovel and a 28-cubic-yard loader at the Wylo Mine.
- (7) Utilizes a 110-cubic-yard dragline, a 53-cubic-yard shovel, a 22-cubic-yard hydraulic excavator and two 28-cubic-yard loaders.
- (8) Currently utilizes 156-cubic-yard, 90-cubic-yard and 45-cubic-yard draglines and 60-cubic-yard and 82-cubic-yard shovels. This mining complex is currently being expanded to include the addition of a 130-cubic-yard dragline.
- (9) Canyon Fuel is an equity investment and its financial statements are not consolidated into the Company's financial statements.

- (10) Currently under development; full production projected to begin with the addition of a longwall in the 3(rd) quarter of 2000.
- (11) Utilizes 76-cubic-yard and 64-cubic-yard draglines at Medicine Bow and 32-cubic-yard dragline at Seminole II.
- (12) Includes production from a surface mine which was idled in 1998 due to the exhaustion of reserves.

All mining complexes described above have unit train load-out facilities except Campbell's Creek. Preparation plants are located at the following complexes: Mingo Logan, Dal-Tex, Hobet 21, Arch of West Virginia, Samples, Campbell's Creek, and Lone Mountain. The mining complexes, mines and related facilities described above are accessible by public road, and power to the complexes, mines and facilities is supplied by public utility companies doing business in the area of such operations. The plant and equipment at each of the mining complexes are suitable for the mining operations undertaken at each complex.

All of the coal reserves at the mining complexes described above are either compliance or low-sulfur coal, with the exception of the coal reserves at the Arch of Illinois mining complex.

Although the Company believes it has a strong reserve base relative to its competition, the Company's profitability depends substantially on having access to coal reserves that have the geologic characteristics that enable them to be mined at competitive costs. There can be no assurance that replacement reserves, particularly in central Appalachia, will be available when required or, if available, that such replacement reserves can be mined at costs comparable to those characteristic of the depleting mines. Exhaustion of reserves at particular mines can also have an adverse effect on operating results that is disproportionate to the percentage of overall production represented by the tonnage produced at such mines.

The Company may experience significant fluctuations in operating results in the future, both on an annual and quarterly basis, as a result of one or more factors beyond its control, including expiration or termination of, or sales price redeterminations or suspensions of deliveries under, long-term contracts; disruption of transportation services; changes in mine operating conditions; changes in laws or regulations, including permitting requirements; unexpected results in litigation; work stoppages or other labor difficulties; competitive and overall coal market conditions; and general economic conditions. The Company's mining operations are subject to conditions or events beyond the Company's control that can affect the cost of mining at particular mines for varying lengths of time and could have an adverse effect on results of operations. These factors include weather conditions; fires and explosions; equipment replacement and repair requirements; variations in coal seam thickness; amount of overburden, rock and other natural materials; other surface or subsurface conditions. Such production factors frequently result in significant fluctuations in operating results.

Third quarter results of operations are frequently adversely affected by lower production and resultant higher costs due to scheduled vacation periods at the majority of the Company's mines. In addition, costs are typically somewhat higher during vacation periods because of maintenance activity carried on during those periods. These adverse effects may make the third quarter not comparable to the other quarters and not indicative of results to be expected for the full year.

TRANSPORTATION

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

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. On December 31, 1998, the Company sold its idled Big Sandy Terminal operation to Aquila Energy Corporation.

The Paint Creek Terminal is located on leased property on the Kanawha River at Crown Hill, West Virginia. The facility transloads coal trucked from the Samples Mine for shipment by barge to the Company's customers.

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.

Arch Western owns a 5.4% equity interest and Canyon Fuel owns a 9.2% equity interest in the Los Angeles Export Terminal ("LAXT"), which leases a dry bulk terminal operation within the Port of Los Angeles. LAXT is served by the Union Pacific railroad. Three loop tracks circle a stockpile area with a capacity of 75 million tons. Current annual rated capacity at the terminal is 10 million tons. The City of Los Angeles owns the land upon which the facility has been constructed. LAXT has entered into a 35 year lease with the City which provides compensation for its contribution of cash and land to the venture. The total cost of the facility is approximately \$143 million.

REGULATIONS AFFECTING COAL MINING

Coal mining is subject to strict regulation by federal, state, and local authorities. The scope of the regulation includes environmental and health and safety matters, and permits are required to be obtained by mining companies, the terms of which strictly regulate the environmental effects of coal mining.

Permitting and Environmental Matters

Numerous permits are required for mining operations. Other than as described in "Item 3. Legal Proceedings" below, the Company believes all permits required to conduct present mining operations have been obtained and that, upon the filing of the required information with the appropriate regulatory agencies, all permits necessary for continuing operations will be obtained. However, as described in "Item 3. Legal Proceedings" below, the regulatory environment in West Virginia is changing with respect to current or future large scale surface mines. The regulatory authorities have considerable discretion in the timing of permit issuance. Because both private individuals and the public at large possess rights to comment on and otherwise engage in the permitting process, including intervention in the courts. There can be no assurance that all permits will be issued in a timely matter or that permitting requirements will not be changed in a manner adversely affecting the Company.

The federal Surface Mining Control and Reclamation Act of 1977 ("SMCRA") was enacted to regulate certain surface mining of coal and the surface effects of underground mining. All states in which the Company's subsidiaries operate have similar laws and regulations enacted pursuant to SMCRA which regulate surface and deep mining and that impose, among other requirements, reclamation and environmental requirements and standards.

The federal Clean Water Act ("CWA") affects coal mining operations in two principal ways. First, the Army Corps of Engineers (the "Corps") issues permits under Section 404 of the CWA whenever a mine operator proposes to build a fill or impoundment in waters of the United States. In addition, the Environmental Protection Agency (the "EPA") must approve the issuance by a state agency of an NPDES (National Pollutant Discharge Elimination System) permit under Section 402 of the CWA. These permits encompass storm water discharges from a mine facility. Regular monitoring and compliance with reporting requirements and performance standards are preconditions for the issuance and renewal of NPDES permits governing the discharge of pollutants into waters. All states in which the Company's subsidiaries operate also have laws restricting discharge of pollutants into the waters of those states.

The federal Resource Conservation and Recovery Act ("RCRA") and implementing federal regulations exclude from the definition of hazardous waste all coal extraction, beneficiation and processing wastes. Additionally, other coal mining wastes which are subject to a SMCRA permit are exempt from RCRA permits and standards. Each of the states in which the Company's subsidiaries are currently engaged in mining similarly exempt coal mining waste from their respective state hazardous waste laws and regulations. The federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act, affects coal mining operations by subjecting them to

liability for the remediation of releases of hazardous substances (other than waste excluded from federal and state regulation, as noted above) that may endanger public health or welfare or the environment.

The federal Clean Air Act, as amended in 1990, imposes numerous requirements on various categories of emission sources and West Virginia state air regulations impose permitting obligations and performance standards on certain coal preparation plants and coal handling facilities, such as crushers and screens.

Health and Safety Matters

The federal Mine Safety and Health Act of 1977 imposes health and safety standards on all mining operations. Regulations are comprehensive and affect numerous aspects of mining operations, including training of mine personnel, mining procedures, blasting, and the equipment used in mining operations. The Black Lung Benefits Reform Act of 1977 generally requires each coal mine operator to secure payment of federal and state black lung benefits to its employees through insurance, bonds, or contributions to a state-controlled fund. The Black Lung Benefits Reform Act of 1977 also provides for the payment from a trust fund of benefits and medical expenses to employees for whom no benefits have been obtainable from their employer. This trust is financed by a tax on coal sales.

The Coal Industry Retiree Health Benefit Act of 1992 ("Benefit Act") addressed two under-funded trust funds which were created to provide medical benefits for certain United Mine Workers Association ("UMWA") retirees. The Benefit Act provides for the funding of medical and death benefits for certain retired members of the UMWA through premiums to be paid by assigned operators (former employers), transfers of monies in 1993 and 1994 from an overfunded pension trust established for the benefit of retired UMWA members, and transfers from the Abandoned Mine Lands Fund (funded by a federal tax on coal production) that commenced in 1995.

Compliance with Regulatory Requirements and Existing Environmental Liability

The Company's operating subsidiaries endeavor to conduct their operations in compliance with all applicable federal, state, and local laws and regulations. However, because of the extensive and comprehensive regulatory requirements, violations during mining operations are not unusual in the industry. From time to time the Company and its subsidiaries are party to civil and administrative proceedings as a result of alleged failures to comply with mandatory federal or state health and safety regulations. The Company believes that any adverse results in the currently pending proceedings, if incurred, would not have a material adverse effect on the Company's consolidated financial condition, results of operations, or liquidity. See "Item 3. Legal Proceedings."

EMPLOYEES

As of February 5, 1999, the Company and its subsidiaries (including Canyon Fuel) employed a total of 4,455 persons (including 27 part-time employees), 1,003 of whom were represented by the UMWA under a collective bargaining agreement that expires in 2002.

EXECUTIVE OFFICERS

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

Steven F. Leer, 46, has been President and Chief Executive Officer of the Company since 1992.

Kenneth G. Woodring, 49, has been Executive Vice President -- Mining Operations of the Company since 1997. Mr. Woodring served as Senior Vice President -- Operations of Ashland Coal since 1989.

C. Henry Besten, Jr., 50, has been Vice President -- Strategic Marketing of the Company and President of the Company's Arch Energy Resources, Inc. subsidiary since 1997. Mr. Besten served as Senior Vice President -- Marketing for Ashland Coal since 1990.

John W. Eaves, 41, has been Vice President -- Marketing of the Company since 1997 and President of the Company's Arch Coal Sales Company, Inc. since 1995. Prior to 1995, he held a series of sales related positions with the Company.

Patrick A. Kriegshauser, 37, has been Senior Vice President and Chief Financial Officer of the Company since July 1998. Mr. Kriegshauser served as Senior Vice President, Treasurer and Chief Financial Officer of the Company from August 1996. From 1995 to 1996 he served as the Company's Vice President and Controller and from 1993 to 1995 he served as its Vice President -- Planning and Development.

David B. Peugh, 44, has been Vice President--Business Development of the Company since 1993. Prior to 1993, Mr. Peugh was Director of Exploration and Development of Ashland Coal.

Jeffrey N. Quinn, 40, has been Senior Vice President -- Law & Human Resources, Secretary and General Counsel of the Company since 1995 and, during the prior five years, he served as its Senior Vice President, Secretary and General Counsel.

Robert W. Shanks, 45, has been Vice President -- Operations of the Company since 1997. He was President of the Company's Apogee Coal Company subsidiary since 1988.

ITEM 2. PROPERTIES

Arch Coal and its operating subsidiaries (but not including Canyon Fuel as Arch Coal's interest in it is accounted for on the equity method) sold 81.1 million tons of coal in the twelve months ended December 31, 1998, as compared to 40.5 and 29.4 million tons sold in the twelve months ended December 31, 1997 and 1996, respectively. The growth in the tons sold is due to the Ashland Coal merger effective July 1, 1997 and the Arch Western transaction effective June 1, 1998. Of the total tonnage sold in the twelve months ended December 31, 1998, approximately 76% was sold under long-term contracts, as compared to 72% for the twelve months ended December 31, 1997 and 1996, respectively, with the balance being sold on the spot market. In the twelve months ended December 31, 1998, Arch Coal and its operating subsidiaries sold 3.7 million tons of coal in the export market (which does not include tons sold by Canyon Fuel), compared to 1.9 and 0.1 million tons in the twelve months ended December 31, 1997 and 1996, respectively.

The Company estimates that as of December 31, 1998 it owned or controlled measured (proven) and indicated (probable) coal reserves of approximately 3.7 billion tons, as set forth in the following table. Reserve estimates are prepared by the Company's engineers and geologists and are reviewed and updated periodically. Total reserve estimates will change from time to time reflecting mining activities, analysis of new engineering and geological data, changes in reserve holdings and other factors. Anticipated losses from extraction and, where applicable, washing of the coal have been eliminated from the estimate. The Company believes that a majority of these reserves are comprised of low-sulfur coal, and a substantial portion of such low-sulfur coal is so-called "compliance coal." Compliance coal emits 1.2 pounds or less of sulfur dioxide per million Btu upon combustion without the aid of sulfur reduction technology, and is referred to as such because combustion of such coal results in sulfur emissions within the parameters required by the Clean Air Act.

RECOVERABLE COAL:

REGION OR STATE -----	MEASURED -----	INDICATED -----	TOTAL -----
(THOUSANDS OF TONS)			
Wyoming.....	1,469.1	68.8	1,537.9
Central Appalachia.....	1,010.2	418.2	1,428.4
Illinois.....	243.7	86.7	330.4
Utah*.....	191.0	57.4	248.4
Colorado.....	120.3	24.9	145.2
Total.....	3,034.3	656.0	3,690.3

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* Represents 100% of the reserves held by Canyon Fuel

On October 1, 1998, the Company was the successful bidder in a competitive federal coal lease auction for the 3,546 acre Thundercloud Tract in the Powder River Basin of Wyoming. The Thundercloud Tract contains an estimated 412 million tons of demonstrated coal reserves and is contiguous with Arch Coal's Black Thunder mine.

The Company's coal properties are either owned outright or controlled by lease. As of December 31, 1998, the Company's subsidiaries owned, or controlled primarily through long-term leases, approximately 100,800, 50,400 and 14,500 acres of coal lands in Wyoming, Utah and Colorado, respectively; 273,000, 90,500 and 2,000 acres of coal lands in West Virginia, Eastern Kentucky, and Virginia, respectively; and 118,600 acres of coal lands in the Illinois Basin.

Approximately 77,700 acres of the Company's 650,000 acres of coal land (which totals include 100% of the acreage held by Canyon Fuel) are leased from the federal government with terms expiring between 1999 and 2018, subject to readjustment and/or extension and to earlier termination for failure to meet diligent development requirements. Additionally, private term leases covering principal reserves under the Company's current mining plans are not scheduled to expire prior to expiration of projected mining activities. The Company's subsidiaries also control through ownership or long-term leases approximately 5,880 acres of land which are used either for its coal processing facilities or are being held for possible future development. 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. Most of these leases run until the exhaustion of mineable and merchantable coal. The remaining leases have primary terms ranging from one to 40 years from the date of their execution, with most containing options to renew. The majority of the significant leases are on a percentage royalty basis. In certain cases, a lease bonus (prepaid royalty) is required, payable either at the time of execution of the lease or in annual installments following such execution. In most cases, the prepaid royalty amount is applied to reduce future production royalties. Mining plans are not necessarily indicative of the life of the mine. The extent to which reserves will eventually be mined depends upon a variety of factors, including future economic conditions and governmental actions affecting both the mining and marketability of coal.

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 66% consist of compliance coal while an additional 24% 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 substantial portion of the low-sulfur and compliance coal reserves at the Mingo Logan operations may also be used as a high-volatile, low-sulfur, 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 carrying cost of the Company's coal reserves at December 31, 1998 was \$1.33 billion, consisting of \$13.6 million of prepaid royalties included in current assets, \$31.6 million of prepaid royalties classified as an other asset, and \$1.28 billion net book value of coal lands and mineral rights.

The Company's executive headquarters occupy approximately 50,000 square feet of leased space at CityPlace One, St. Louis, Missouri. See "Item 1. Business" incorporated by reference herein 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 that is utilized in their mining operations.

ITEM 3. LEGAL PROCEEDINGS

A customer of the Company informed the Company that its power plant to which the Company supplies coal will no longer provide baseload capacity to the public utility which purchases the electricity produced from the plant and instead will be used to provide peak demand only. It is alleged by the customer that the plant will require substantially less coal under the customer's existing above-market contract with the Company. The Company has filed a civil action in Federal District Court in the Southern District of West Virginia alleging breach of contract and other causes of action against the customer in respect of the customer's failure to comply with the terms of this contract. On July 17, 1998, the court granted the customer's motion to stay the lawsuit pending arbitration. As of December 31, 1998, the carrying amount of acquisition costs allocated to this coal supply contract amounts to approximately \$13.7 million. The Company currently expects that it will recover the carrying amount of this asset, however, the ultimate outcome of this matter is uncertain.

On October 24, 1996, the rock strata overlaying an abandoned underground mine adjacent to the coal-refuse impoundment used by the Lone Mountain preparation plant failed, resulting in an accidental discharge of approximately 6.3 million gallons of water and fine coal slurry into a tributary of the Powell River in Lee County, Virginia. At the request of the EPA and the U.S. Fish and Wildlife Service, the United States Attorney for the Western District of Virginia opened a criminal investigation of the 1996 incident. The Company has cooperated with the U.S. Attorney throughout the investigation which is still pending.

On October 31, 1997, the EPA notified a Company subsidiary that it was a potentially responsible party in the investigation and remediation of two hazardous waste sites located in Kansas City, Kansas, and Kansas City, Missouri. The Company's involvement arises from the subsidiary's sale, in the mid-1980's, of fluids containing small quantities of polychlorinated biphenyls ("PCBs") to a company authorized to engage in the processing and disposal of these wastes. Some of these waste materials were sent to one of the sites for final disposal. The Company responded to the information request submitted by EPA on December 1, 1997. Any liability which might be asserted by EPA against the Company is not believed to be material because of the de minimis quantity and concentration of PCBs linked to the Company. Moreover, the party with whom the subsidiary contracted to dispose of the waste material has agreed to indemnify the Company for any costs associated with this action.

On July 16, 1998, 10 individuals and The West Virginia Highlands Conservancy filed suit in U.S. District Court for the Southern District of West Virginia alleging violations of SMCRA and the Clean Water Act. Named as defendants in the suit are the director of the West Virginia Division of Environmental Protection ("DEP") and officials of the U.S. Army Corps of Engineers (the "Corps"). In their complaint, the plaintiffs allege that the DEP has violated its duties under SMCRA and the Clean Water Act by approving surface mining permits that authorize the construction of "valley fills." These are the large, engineered works into which the excess earth and rock extracted above and between the seams of coal that are removed during surface mining is placed. The approval of such permits are alleged to "result in unpermitted discharges of pollutants into state waters, violations of state water quality standards, disturbance to the 100-foot buffer zone around streams, [and] destruction to riparian vegetation." The complaint also alleges that the DEP has failed to require that lands mined be restored to their approximate original contour and that approved post-mining land uses are enforced following reclamation.

Four indirect, wholly-owned subsidiaries of the Company currently hold nine permits that were identified in the complaint as violating the legal standards that the plaintiffs have requested the district court to interpret. In addition, a pending permit application for the Company's Dal-Tex operation (known as the "Spruce Fork Permit") is specifically identified as a permit whose issuance should be enjoined. Three subsidiaries of the Company intervened in the lawsuit in support of the Corps and the DEP on August 6, 1998. The Company and the other defendants have vigorously opposed claims asserted in the lawsuit.

A settlement was entered between the plaintiffs and the Corps on December 23, 1998. Under that agreement, the plaintiffs agreed to dismiss all claims against the Corps in return for the Corps agreeing, in conjunction with other federal agencies, to conduct a comprehensive environmental impact study of the long-term effects of valley fills. During the twenty-four (24) months anticipated to complete the study, the agreement imposes new, interim standards that will be used in reviewing and approving permits. The most significant change imposed under the settlement agreement is the obligation of a permit applicant to seek an individual sec. 404 Clean Water Act permit if it proposes to construct a valley fill affecting a drainage area larger than 250 acres.

The Company's Dal-Tex operation's Spruce Fork Permit was specifically excluded from the terms of the settlement. Nevertheless, EPA withdrew its final objections to a Clean Water Act section 402 NPDES permit that had been pending since mid-1998. The Company was notified by the Corps on January 21, 1999 that it would issue its Clean Water Act section 404 permit within five (5) days, which was the last permit, approval, or authorization needed to commence mining on the Spruce Fork Permit. On January 26, 1999, the plaintiffs moved for a temporary restraining order. On February 3, 1999, the U.S. District Court for the Southern District of West Virginia entered the restraining order, which was subsequently extended until March 5, 1999. Simultaneously, the court commenced a hearing on plaintiff's motion for a preliminary injunction which concluded February 26, 1999. The Company expects a ruling on the preliminary injunction prior to the expiration of the temporary restraining order. Should the court enter the preliminary injunction, or otherwise delay substantially the issuance of the permit, the decision will have a material adverse effect on the Dal-Tex operation.

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 1998.

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 1998 Annual Report to Stockholders under the caption "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 1998 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 1998 Annual Report to Stockholders under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," 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 1998 Annual Report to Stockholders under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," and is incorporated herein by reference.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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

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

On July 1, 1997, the Board of Directors of the Company engaged Ernst & Young LLP, to act as the Company's independent certified public accountant. Ernst & Young LLP replaced Arthur Andersen LLP on July 1, 1997. Ernst & Young LLP also acts as the independent auditor for Ashland Inc., the Company's majority stockholder. Arthur Andersen LLP's report on the Company's financial statements for the fiscal year ended December 31, 1996 did not contain an adverse opinion or disclaimer of opinion, nor was it qualified or modified as to uncertainty, audit scope or accounting principles. There were no disagreements between the Company and Arthur Andersen LLP on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedures during such fiscal year or thereafter through and including the date of the conclusion of Arthur Andersen LLP's services, which, if not resolved to the satisfaction of Arthur Andersen LLP, would have caused Arthur Andersen LLP to make reference to the matter in their report.

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 subcaption "Nominees for Director" which appears under the caption "Election of Directors" beginning on Page 2 in the Company's Proxy Statement to be distributed to Company stockholders in connection with the Company's 1999 Annual Meeting (the "1999 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 "Option Grants in Last Fiscal Year" table, the "Aggregated Option Exercise in Last Fiscal Year and Fiscal Year-End Option Values" table, the Pension Plan section (including the table therein), the Employment Agreements section, the Compensation of Directors section, and the Compensation Committee Interlocks and Insider Participation section appearing on pages 11 to 14 in the Company's 1999 Proxy Statement. No portion of the Personnel and Compensation Committee Report on Executive Compensation for 1998 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 "Security Ownership of Certain Beneficial Owners and Management" beginning on Page 4 of the Company's 1999 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

There is hereby incorporated by reference into this Annual Report on Form 10-K the information appearing under the caption "Certain Relationships and Related Transactions" beginning on Page 14 of the Company's 1999 Proxy Statement.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

- (a) (1) The following consolidated financial statements of Arch Coal, Inc. and subsidiaries included in the Company's 1998 Annual Report to Stockholders are incorporated by reference:
- Consolidated Statements of Income -- Years Ended December 31, 1998, 1997 and 1996
 - Consolidated Balance Sheets -- December 31, 1998 and 1997
 - Consolidated Statements of Stockholders' Equity -- Years Ended December 31, 1998, 1997, and 1996
 - Consolidated Statements of Cash Flows -- Years Ended December 31, 1998, 1997 and 1996
 - Notes to Consolidated Financial Statements
- The following financial statements of Canyon Fuel Company, LLC are incorporated by reference in Exhibit 99:
- Statements of Income -- Year Ended December 31, 1998 and for the Period From December 20, 1996 (inception) Through December 31, 1997
 - Balance Sheets -- December 31, 1998 and 1997
 - Statements of Members' Equity -- Year Ended December 31, 1998 and for the Period From December 20, 1996 (inception) Through December 31, 1997
 - Statements of Cash Flows -- Year Ended December 31, 1998 and For the Period From December 20, 1996 (inception) Through December 31, 1997
 - Notes to 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 23.
 - Report of Arthur Andersen LLP (filed as Exhibit 99.1 hereto and incorporated herein)
 - Report of PricewaterhouseCoopers LLP (filed as Exhibit 99.2 hereto and incorporated herein)
- 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:
- 2.1 Purchase and Sale Agreement dated as of March 22, 1998 among Atlantic Richfield Company, ARCO Uinta Coal Company, Arch Coal, Inc. and Arch Western Acquisition Corporation (incorporated herein by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K filed June 15, 1998)

- 2.2 Contribution Agreement among Arch Coal, Inc., Arch Western Acquisition Corporation, Atlantic Richfield Company, Delta Housing, Inc. and Arch Western Resources LLC, dated as of March 22, 1998 (incorporated herein by reference to Exhibit 2.2 of the Company's Current Report on Form 8-K filed June 15, 1998)
- 3.1 Restated Certificate of Incorporation of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.2 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 3.2 Restated and Amended Bylaws of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.4 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 4.1 Stockholders Agreement, dated as of April 4, 1997, among Carboex International, Ltd., Ashland Inc. and Arch Coal, Inc. (formerly Arch Mineral Corporation) (incorporated herein by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 4.2 Assignment of Rights, Obligations and Liabilities under the Stockholders Agreement between Carboex International, Limited and Carboex, S.A. effective as of October 15, 1998 (filed herewith)
- 4.3 Registration Rights Agreement, dated as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Inc., Carboex International, Ltd. and the entities listed on Schedules I and II thereto (incorporated herein by reference to Exhibit 4.2 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 4.4 Assignment of Registration Rights between Carboex International, Limited and Carboex, S.A. effective as of October 15, 1998 (filed herewith)
- 4.5 Agreement Relating to Nonvoting Observer, executed as of April 4, 1997, among Carboex International, Ltd., Ashland Inc., Ashland Coal, Inc. and Arch Coal, Inc. (formerly Arch Mineral Corporation) (incorporated herein by reference to Exhibit 4.3 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 4.6 Assignment of Right to Maintain a Non-Voting Observer at Meetings of the Board of Directors of Arch Coal, Inc. between Carboex International, Limited and Carboex, S.A. effective as of October 15, 1998 (filed herewith)
- 4.7 Agreement for Termination of the Arch Mineral Corporation Voting Agreement and for Nomination of Directors, dated as of April 4, 1997, among Hunt Coal Corporation, Petro-Hunt Corporation, each of the trusts listed on Schedule I thereto, Ashland Inc. and Arch Mineral Corporation (incorporated herein by reference to Exhibit 4.4 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 4.8 \$600,000,000 Revolving Credit Facility, \$300,000,000 Term Loan Credit Agreement by and among Arch Coal, Inc., the Lenders party thereto, PNC Bank, National Association, as Administrative Agent, Morgan Guaranty Trust Company of New York, as Syndication Agent, and First Union National Bank, as Documentation Agent, dated as of June 1, 1998 (incorporated herein by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed June 15, 1998)
- 4.9 \$675,000,000 Term Loan Credit Agreement by and among Arch Western Resources LLC, the Banks party thereto, PNC Bank, National Association, as Administrative Agent, Morgan Guaranty Trust Company of New York, as Syndication Agent, and NationsBank N.A., as Documentation Agent dated as of June 1, 1998 (incorporated herein by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed June 15, 1998)

- 4.10 Omnibus Amendment Agreement dated as of June 1, 1998 in respect to Arch Coal Trust no. 1998-1, Parent Guaranty and Suretyship Agreement, Lease Intended as Security, Subsidiary Guaranty and Suretyship Agreement, each dated as of January 15, 1998, among Apogee Coal Company, Catenary Coal Company, Hobet Mining, Inc., Arch Coal, Inc., Great-West Life & Annuity Insurance Company, Bank of Montreal, Barclays Bank, PLC, First Union National Bank, BA Leasing and Capital Corporation, First Security Bank, National Association, Arch Coal Sales Company, Inc., Ark Land Company and Mingo Logan Coal Company (incorporated herein by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed June 15, 1998)
- 4.11 Lease Intended as Security dated as of January 15, 1998, among Apogee Coal Company, Catenary Coal Company and Hobet Mining, Inc., as Lessees; The First Security Bank, National Association, as Lessor, and the Certificate Purchasers named therein. (incorporated herein by reference to Exhibit 4.5 of the Company's Annual Report on Form 10-K for the Year Ended December 31, 1997)
- 10.1 Coal Off-Take Agreement, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Carboex International, Ltd. and Ashland Inc. (incorporated herein by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 10.2 Sales Agency Agreement, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Inc. and Carboex S.A. (incorporated herein by reference to Exhibit 10.2 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 10.3 Assignment, Assumption and Amendment of Coal Sales Agency Agreement, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Coal, Inc., Saarbergwerke AG and Carboex International, Ltd. (incorporated herein by reference to Exhibit 10.3 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 10.4 Shareholder Services Contract, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Coal, Inc., Carboex International, Ltd. and Ashland Inc. (incorporated herein by reference to Exhibit 10.4 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
- 10.5 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, November 12, 1987, Lease Exchange Agreement dated July 2, 1979 amended as of January 1, 1984 and January 7, 1993; February 24, 1993; Partial Release dated as of May 6, 1988; Assignments dated March 15, 1990, 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)
- 10.6 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)
- 10.7 Lease between Little Coal Land Company and Ashland Land & Development Co., a wholly-owned subsidiary of Ashland Coal, 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)

- 10.8 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)
- 10.9 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)
- 10.10 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)
- 10.11 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)
- 10.12 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)
- 10.13 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)
- 10.14 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)
- 10.15 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)
- 10.16 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)

10.17	Federal Coal Lease dated as of June 24, 1993 between the United States Department of the Interior and Southern Utah Fuel Company (filed herewith)
10.18	Federal Coal Lease between the United States Department of the Interior and Utah Fuel Company (filed herewith)
10.19	Federal Coal Lease dated as of July 19, 1997 between the United States Department of the Interior and Canyon Fuel Company, LLC (filed herewith)
10.20	Federal Coal Lease dated as of January 24, 1996 between the United States Department of the Interior and the Thunder Basin Coal Company (filed herewith)
10.21	Federal Coal Lease Readjustment dated as of November 1, 1967 between the United States Department of the Interior and the Thunder Basin Coal Company (filed herewith)
10.22	Federal Coal Lease effective as of May 1, 1995 between the United States Department of the Interior and Mountain Coal Company (filed herewith)
10.23	Federal Coal Lease dated as of January 1, 1999 between the Department of the Interior and Ark Land Company (filed herewith)
10.24	Employment Agreement between Arch Mineral Corporation and Steven F. Leer, dated March 1, 1992 (incorporated herein by reference to Exhibit 10.12 to the Company's Registration Rights Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
10.25	Form of Indemnity Agreement between Arch Coal, Inc. and Indemnatee (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)
10.26	Arch Coal, Inc. 1998 Incentive Compensation Plan (incorporated herein by reference to Exhibit 10.22 of the Company's Annual Report on Form 10-K for the Year Ended December 31, 1997)
10.27	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)
10.28	Arch Coal, Inc. 1997 Stock Incentive Plan (incorporated herein by reference to Annex E to Appendix A to the Proxy Statement/Prospectus forming part of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997)
10.29	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)
10.30	Arch Coal, Inc. Outside Directors' Deferred Compensation Plan effective January 1, 1999 (filed herewith)
10.31	Second Amendment to the Arch Mineral Corporation Supplemental Retirement Plan effective January 1, 1998 (filed herewith).
13	Portions of the Company's Annual Report to Stockholders for the year ended December 31, 1998 (filed herewith)
16	Letter of Arthur Andersen LLP filed pursuant to Regulation S-K, Item 304(a)(3) (filed herewith)
21	Subsidiaries of the Company (filed herewith)
23.1	Consent of Ernst & Young LLP (filed herewith)
23.2	Consent of Arthur Andersen LLP (filed herewith)
23.3	Consent of PricewaterhouseCoopers LLP (filed herewith)
24	Power of Attorney (filed herewith)
27	Financial Data Schedule (filed herewith)

99 Financial Statements of Canyon Fuel Company, LLC (filed herewith)

99.1 Report of Arthur Andersen LLP (filed herewith)

99.2 Report of PricewaterhouseCoopers LLP (filed herewith)

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* Exhibits 10.26, 10.27, 10.28, 10.29 and 10.31 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.

(b) Reports on Form 8-K
No reports on Form 8-K were filed by the Company in the quarter ended December 31, 1998.

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: PATRICK A. KRIEGSHAUSER

Patrick A. Kriegshauser
Senior Vice President and
Chief Financial Officer

Date: March 2, 1999

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on March 2, 1999.

SIGNATURES -----	CAPACITY -----
STEVEN F. LEER ----- Steven F. Leer	President and Chief Executive Officer and Director
PATRICK A. KRIEGSHAUSER ----- Patrick A. Kriegshauser	Senior Vice President and Chief Financial Officer (Principal Accounting Officer)
* ----- James R. Boyd	Director
* ----- Paul W. Chellgren	Director
* ----- Ignacio Dominguez Urquijo	Director
* ----- Thomas L. Feazell	Director
* ----- John R. Hall	Director
* ----- Robert L. Hintz	Director
* ----- Douglas H. Hunt	Director
* ----- James L. Parker	Director
* ----- A. Michael Perry	Director

SIGNATURES

CAPACITY

*

Director

J. Marvin Quin

*

Director

Theodore D. Sands

*By:

JEFFRY N. QUINN
-----Jeffry N. Quinn
As Attorney-in-fact

ORIGINAL POWERS OF ATTORNEY AUTHORIZING STEVEN F. LEER, PATRICK A. KRIEGSHAUSER AND JEFFRY N. QUINN, AND EACH OF THEM, TO SIGN THIS ANNUAL REPORT ON FORM 10-K AND AMENDMENTS THERETO ON BEHALF OF THE ABOVE-NAMED PERSONS HAVE BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION AS EXHIBIT 24 TO THIS REPORT.

SCHEDULE II

ARCH COAL, INC. AND SUBSIDIARIES
 SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS
 (IN THOUSANDS)

DESCRIPTION -----	BALANCE AT BEGINNING OF YEAR -----	ADDITIONS CHARGED TO COSTS AND EXPENSES -----	DEDUCTIONS (1) -----	OTHER (2) -----	BALANCE AT END OF YEAR -----
Year Ended December 31, 1998					
Reserves Deducted from Asset Accounts					
Property, Plant, and Equipment.....	\$ --	\$ --	\$ --	\$ --	\$ --
Other Assets -- Other Notes and Accounts Receivable.....	471	306	195	--	582
Current Assets -- Supplies Inventory.....	17,681	2,292	5,999	9,927	23,901
Year Ended December 31, 1997					
Reserves Deducted from Asset Accounts					
Property, Plant, and Equipment.....	\$ 100	\$ --	\$ 100	\$ --	\$ --
Other Assets -- Other Notes and Accounts Receivable.....	410	61	--	--	471
Current Assets -- Supplies Inventory.....	11,313	1,218	282	5,432	17,681
Year Ended December 31, 1996					
Reserves Deducted from Asset Accounts					
Property, Plant, and Equipment.....	\$ 1,111	\$ --	\$1,011	\$ --	\$ 100
Other Assets -- Other Notes and Accounts Receivable.....	408	150	148	--	410
Current Assets -- Supplies Inventory.....	11,976	500	1,163	--	11,313

(1) Reserves utilized, unless otherwise indicated.

(2) Balances acquired in the Arch Western transaction and Ashland Coal merger.

EXHIBIT INDEX

EXHIBIT NUMBER -----	DESCRIPTION -----
2.1	Purchase and Sale Agreement dated as of March 22, 1998 among Atlantic Richfield Company, ARCO Uinta Coal Company, Arch Coal, Inc. and Arch Western Acquisition Corporation (incorporated herein by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K filed June 15, 1998)...
2.2	Contribution Agreement among Arch Coal, Inc., Arch Western Acquisition Corporation, Atlantic Richfield Company, Delta Housing, Inc. and Arch Western Resources LLC, dated as of March 22, 1998 (incorporated herein by reference to Exhibit 2.2 of the Company's Current Report on Form 8-K filed June 15, 1998).....
3.1	Restated Certificate of Incorporation of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.2 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
3.2	Restated and Amended Bylaws of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.4 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
4.1	Stockholders Agreement, dated as of April 4, 1997, among Carboex International, Ltd., Ashland Inc. and Arch Coal, Inc. (formerly Arch Mineral Corporation) (incorporated herein by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
4.2	Assignment of Rights, Obligations and Liabilities under the Stockholders Agreement between Carboex International, Limited and Carboex, S.A. effective as of October 15, 1998 (filed herewith).....
4.3	Registration Rights Agreement, dated as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Inc., Carboex International, Ltd. and the entities listed on Schedules I and II thereto (incorporated herein by reference to Exhibit 4.2 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
4.4	Assignment of Registration Rights between Carboex International, Limited and Carboex, S.A. effective as of October 15, 1998 (filed herewith).....
4.5	Agreement Relating to Nonvoting Observer, executed as of April 4, 1997, among Carboex International, Ltd., Ashland Inc., Ashland Coal, Inc. and Arch Coal, Inc. (formerly Arch Mineral Corporation) (incorporated herein by reference to Exhibit 4.3 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
4.6	Assignment of Right to Maintain a Non-Voting Observer at Meetings of the Board of Directors of Arch Coal, Inc. between Carboex International, Limited and Carboex, S.A. effective as of October 15, 1998 (filed herewith).....
4.7	Agreement for Termination of the Arch Mineral Corporation Voting Agreement and for Nomination of Directors, dated as of April 4, 1997, among Hunt Coal Corporation, Petro-Hunt Corporation, each of the trusts listed on Schedule I thereto, Ashland Inc. and Arch Mineral Corporation (incorporated herein by reference to Exhibit 4.4 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....

EXHIBIT NUMBER -----	DESCRIPTION -----
4.8	\$600,000,000 Revolving Credit Facility, \$300,000,000 Term Loan Credit Agreement by and among Arch Coal, Inc., the Lenders party thereto, PNC Bank, National Association, as Administrative Agent, Morgan Guaranty Trust Company of New York, as Syndication Agent, and First Union National Bank, as Documentation Agent, dated as of June 1, 1998 (incorporated herein by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed June 15, 1998)...
4.9	\$675,000,000 Term Loan Credit Agreement by and among Arch Western Resources LLC, the Banks party thereto, PNC Bank, National Association, as Administrative Agent, Morgan Guaranty Trust Company of New York, as Syndication Agent, and NationsBank N.A., as Documentation Agent dated as of June 1, 1998 (incorporated herein by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed June 15, 1998).....
4.10	Omnibus Amendment Agreement dated as of June 1, 1998 in respect to Arch Coal Trust no. 1998-1, Parent Guaranty and Suretyship Agreement, Lease Intended as Security, Subsidiary Guaranty and Suretyship Agreement, each dated as of January 15, 1998, among Apogee Coal Company, Catenary Coal Company, Hobet Mining, Inc., Arch Coal, Inc., Great-West Life & Annuity Insurance Company, Bank of Montreal, Barclays Bank, PLC, First Union National Bank, BA Leasing and Capital Corporation, First Security Bank, National Association, Arch Coal Sales Company, Inc., Ark Land Company and Mingo Logan Coal Company (incorporated herein by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed June 15, 1998).....
4.11	Lease Intended as Security dated as of January 15, 1998, among Apogee Coal Company, Catenary Coal Company and Hobet Mining, Inc., as Lessees; The First Security Bank, National Association, as Lessor, and the Certificate Purchasers named therein. (incorporated herein by reference to Exhibit 4.5 of the Company's Annual Report on Form 10-K for the Year Ended December 31, 1997).....
10.1	Coal Off-Take Agreement, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Carboex International, Ltd. and Ashland Inc. (incorporated herein by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
10.2	Sales Agency Agreement, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Inc. and Carboex S.A. (incorporated herein by reference to Exhibit 10.2 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
10.3	Assignment, Assumption and Amendment of Coal Sales Agency Agreement, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Coal, Inc., Saarbergwerke AG and Carboex International, Ltd. (incorporated herein by reference to Exhibit 10.3 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
10.4	Shareholder Services Contract, executed as of April 4, 1997, among Arch Coal, Inc. (formerly Arch Mineral Corporation), Ashland Coal, Inc., Carboex International, Ltd. and Ashland Inc. (incorporated herein by reference to Exhibit 10.4 of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....

EXHIBIT NUMBER	DESCRIPTION
-----	-----
10.5	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, November 12, 1987, Lease Exchange Agreement dated July 2, 1979 amended as of January 1, 1984 and January 7, 1993; February 24, 1993; Partial Release dated as of May 6, 1988; Assignments dated March 15, 1990, 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).....
10.6	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).....
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10.8	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).....
10.9	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).....
10.10	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).....
10.11	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).....

EXHIBIT NUMBER -----	DESCRIPTION -----
10.12	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).....
10.13	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).....
10.14	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).....
10.15	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).....
10.16	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).....
10.17	Federal Coal Lease dated as of June 24, 1993 between the United States Department of the Interior and Southern Utah Fuel Company (filed herewith).....
10.18	Federal Coal Lease between the United States Department of the Interior and Utah Fuel Company (filed herewith).....
10.19	Federal Coal Lease dated as of July 19, 1997 between the United States Department of the Interior and Canyon Fuel Company, LLC (filed herewith).....
10.20	Federal Coal Lease dated as of January 24, 1996 between the United States Department of the Interior and the Thunder Basin Coal Company (filed herewith).....
10.21	Federal Coal Lease Readjustment dated as of November 1, 1967 between the United States Department of the Interior and the Thunder Basin Coal Company (filed herewith).....
10.22	Federal Coal Lease effective as of June 9, 1995 between the United States Department of the Interior and Mountain Coal Company (filed herewith).....
10.23	Federal Coal Lease dated as of January 1, 1999 between the Department of the Interior and Ark Land Company (filed herewith).....
10.24	Employment Agreement between Arch Mineral Corporation and Steven F. Leer, dated March 1, 1992 (incorporated herein by reference to Exhibit 10.12 to the Company's Registration Rights Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....

EXHIBIT NUMBER	DESCRIPTION
10.25	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).....
10.26	Arch Coal, Inc. 1998 Incentive Compensation Plan (incorporated herein by reference to Exhibit 10.22 of the Company's Annual Report on Form 10-K for the Year Ended December 31, 1997).....
10.27	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).....
10.28	Arch Coal, Inc. 1997 Stock Incentive Plan (incorporated herein by reference to Annex E to Appendix A to the Proxy Statement/Prospectus forming part of the Company's Registration Statement on Form S-4 (Registration No. 333-28149) filed on May 30, 1997).....
10.29	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).....
10.30	Arch Coal, Inc. Outside Directors' Deferred Compensation Plan effective January 1, 1999 (filed herewith).....
10.31	Second Amendment to the Arch Mineral Corporation Supplemental Retirement Plan effective January 1, 1998 (filed herewith).....
13	Portions of the Company's Annual Report to Stockholders for the year ended December 31, 1998 (filed herewith).....
16	Letter of Arthur Andersen LLP filed pursuant to Regulation S-K, Item 304(a)(3) (filed herewith).....
21	Subsidiaries of the Company (filed herewith).....
23.1	Consent of Ernst & Young LLP (filed herewith).....
23.2	Consent of Arthur Andersen LLP (filed herewith).....
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24	Power of Attorney (filed herewith).....
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99	Financial Statements of Canyon Fuel Company, LLC (filed herewith).....
99.1	Report of Arthur Anderson LLP (filed herewith).....
99.2	Report of PricewaterhouseCoopers LLP (filed herewith).....

* Exhibits 10.26, 10.27, 10.28, 10.29 and 10.31 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.

EXHIBIT 4.2

Assignment of Rights, Obligations and Liabilities under the
Stockholders Agreement

This Assignment of October 15, 1998, between the assignor, Carboex International, Limited ("CIL"), a company organized under the laws of the Bahamas, and the assignee, Carboex, S.A. ("Carboex"), a company organized under the laws of Spain:

WHEREAS, on April 4, 1997, CIL entered into an agreement known as the Stockholders Agreement (the "Agreement") with Arch Mineral Corporation, now known as Arch Coal, Inc. ("Arch"), and with Ashland, Inc., providing for the nomination and election of a Director of Arch chosen by CIL, and giving CIL a Tag-Along Right to sell shares of Arch under certain circumstances; and

WHEREAS, CIL is an Affiliate of Carboex, and Carboex is a Permitted Transferee of CIL, both as defined in Section 1 of the Agreement; and

WHEREAS, CIL has sold to Carboex on the date hereof 1,640,000 shares of Arch representing all of the shares of Arch owned by CIL at the time of sale; and

WHEREAS, Carboex wishes to receive the assignment, under the terms and conditions of the Agreement and as a Permitted Transferee, of all of the rights, obligations and liabilities of CIL under the Agreement, and CIL is willing to assign to Carboex all of such rights, obligations and liabilities in connection with its sale to Carboex of all of its shares of Arch;

NOW, THEREFORE, CIL hereby irrevocably assigns to Carboex, and Carboex accepts as assignee and Permitted Transferee, all of its rights, obligations and liabilities provided for in the Agreement, and Carboex agrees to be bound by the terms of the Agreement to the same extent and in the same manner as CIL.

Carboex International, Limited

by /s/ Alfonso Martinez
Date:

Received:
Arch Coal, Inc.

Carboex, S.A.

by: /s/ Jeffrey N. Quinn
Date: 2-2-99

by /s/ I. Dominguez
Date:

EXHIBIT 4.4

Assignment of Registration Rights

This Assignment of October 15, 1998, between the assignor, Carboex International, Limited ("CIL"), a company organized under the laws of the Bahamas, and the assignee, Carboex, S.A. ("Carboex"), a company organized under the laws of Spain:

WHEREAS, on April 4, 1997, CIL entered into an agreement known as the Registration Rights Agreement (the "Agreement") with Arch Mineral Corporation, now known as Arch Coal, Inc. ("Arch"), Ashland, Inc. and certain other shareholders of Arch known collectively as the Hunt Entities, providing for the registration of the shares of Arch belonging to CIL; and

WHEREAS, CIL has not exercised any of its rights under the terms of the Agreement; and

WHEREAS, CIL is an affiliate of Carboex, as defined in Article I, Section 1.01 of the Agreement; and

WHEREAS, CIL has sold to Carboex on the date hereof 1,640,000 shares of Arch, representing all of the shares of Arch owned by CIL at the time of sale; and

WHEREAS, Carboex wishes to receive the assignment, under the terms and conditions of the Agreement and as a Permitted Transferee, as defined in Article I, Section 1.01 of the Agreement, of all of the registration rights enjoyed by CIL to the extent provided for by the Agreement, and CIL is willing to assign to Carboex, all of such registration rights in connection with its sale to Carboex of all of its shares to Arch:

NOW, THEREFORE: CIL hereby irrevocably assigns to Carboex, and Carboex accepts as assignee and Permitted Transferee, all of its rights to register shares of Arch provided for in the Agreement, to the extent and with the terms and conditions set forth therein for a Permitted Transferee, and the Agreement shall be binding upon and shall inure to the parties thereto and to Carboex as a Permitted Transferee, in accordance with Article X, Section 10.08 of the Agreement.

Carboex International, Limited

by /s/ Alfonso Martinez
Date:

Received:
Arch Coal, Inc.

Carboex, S.A.

by: /s/ Jeffry N. Quinn
Date: 2-2-99

by /s/ Ignacio Dominguez
Date:

EXHIBIT 4.6

Assignment of Right to Maintain a Non-Voting Observer at Meetings of the
Board of Directors of Arch Coal, Inc.

This Assignment of October 15, 1998, between the assignor, Carboex International, Limited ("CIL"), a company organized under the laws of the Bahamas, and the assignee, Carboex, S.A. ("Carboex"), a company organized under the laws of Spain:

WHEREAS, on April 4, 1997, CIL entered into an agreement (the "Agreement") with Arch Mineral Corporation, now known as Arch Coal, Inc. ("Arch"), Ashland Coal, Inc., and Ashland, Inc., giving CIL the right to have a non-voting observer in attendance at regular and special meetings of the Board of Directors of Arch; and

WHEREAS, CIL is a wholly owned subsidiary of Carboex, and the two companies are affiliates; and

WHEREAS, CIL has sold to Carboex on the date hereof 1,640,000 shares of the common stock of Arch, representing all of the shares of Arch owned by CIL at the time of sale; and

WHEREAS, by a separate agreement CIL has assigned to Carboex the right CIL previously enjoyed to choose a Director of Arch, who would be nominated and elected to the Board of Directors of Arch; and

WHEREAS, the shares sold by CIL to Carboex represent more than 63% of the shares of the common stock of Arch obtained by CIL upon the merger of Arch and Ashland Coal, Inc., such amount being sufficient under the terms of the Agreement to permit CIL to have a non-voting observer present at the regular and special meetings of the Board of Directors of Arch; and

WHEREAS, CIL and Carboex wish Carboex to succeed to the rights of CIL under the Agreement in order that Carboex shall have the right to choose directly the non-voting observer:

NOW, THEREFORE, CIL, irrevocably assigns to Carboex; all of its rights under the Agreement, and Carboex accepts as assignee all of the rights provided for in the Agreement and agrees to be bound by the terms of the Agreement to the same extent and in the same manner as CIL.

Carboex International, Limited

by /s/ Alfonso Martinez
Date:

Received:
Arch Coal, Inc.

Carboex, S.A.

by: /s/ Jeffrey N. Quinn
Date: 2-2-99

by /s/ I. Dominguez
Date:

EXHIBIT 10.17

SUFCo Logical Mining Unit

The Mineral Leasing Act (MLA) of February 25, 1920, as amended by the Federal Coal Leasing Amendments Act (FCLAA) of 1976, authorizes the consolidation of coal leases into a Logical Mining Unit (LMU) . An LMU is an area of land in which the coal resources can be developed in an efficient, economical, and orderly manner as a unit with due regard to conservation of coal resources and other resources.

1. UNIT AREA: This area, specified on the map attached hereto marked Exhibit A, is hereby designated the LMU area, containing 17,255.32 acres and described as follows:

Federal Coal Lease SL-062583

T. 21 S., R. 4 E., Sec. 36, S 1/2.
T. 21 S., R. 5 E., Sec. 31, all.
T. 22 S., R. 4 E., Sec. 1, lots 1-4, S 1/2 N 1/2, S 1/2;
Sec. 12, NW 1/4.
T. 22 S., R. 5 E., Sec. 6, all;
Sec. 7, N 1/2 NE 1/4, E 1/2 NW 1/4.

Containing 2,199.83 acres.

Federal Coal Lease U-062453

T. 21 S., R. 5 E., Sec. 28, SW 1/4 SW 1/4;
Sec. 29, SE 1/4 SE 1/4;
Sec. 32, N 1/2;
Sec. 33, W 1/2 NW 1/4.

Containing 480 acres.

Federal Coal Lease U-0149084

T. 22 S., R. 4 E., Sec. 12, NE 1/4, N 1/2 SE 1/4.

Containing 240 acres.

Federal coal Lease U-47080

T. 21 S., R. 4 E., Sec. 25, all;
Sec. 36, N 1/2.
T. 21 S., R. 5 E., Sec. 30, lots 2-4, W 1/2 SE 1/4.

Containing 1,158.05 acres.

Federal coal Lease U-28297

T. 21 S., R. 5 E. Sec. 32, lots 1-4, N 1/2 S 1/2;
 Sec. 33, lot 1, NW 1/4 SW 1/4.
 T. 22 S., R. 5 E. Sec. 4, lot 4, SW 1/4 NW1/4, W1/2 SW1/4;
 Sec. 5, all;
 Sec. 7, S 1/2 NE 1/4, E 1/2 SW 1/4, SE 1/4;
 Sec. 8, all;
 Sec. 17, NE 1/4, N 1/2 NW 1/4;
 Sec. 18, NE 1/4, E 1/2 NW 1/4.

Containing 2,631.98 acres.

Federal Coal Lease U-63214

T. 21 S., R. 4 E., Sec. 12, E 1/2 SE 1/4;
 Sec. 13, E 1/2 NE 1/4, S 1/2;
 Sec. 14, E 1/2 SW 1/4, SE 1/4;
 Sec. 23, E 1/2, E 1/2 W 1/2;
 Sec. 24, all.
 T. 21 S., R. 5 E., Sec. 15, W 1/2;
 Sec. 16, all;
 Sec. 17, all;
 Sec. 18, all;
 Sec. 19, all;
 Sec. 20, all;
 Sec. 21, all;
 Sec. 22, W 1/2;
 Sec. 26, W 1/2 NW 1/4 SW 1/4, SW 1/4 SW 1/4;
 Sec. 27, all;
 Sec. 28, N 1/2, N 1/2 SW 1/4, SE 1/4 SW 1/4, SE 1/4;
 Sec. 29, E 1/2 NE 1/4, NE 1/4 SE 1/4;
 Sec. 30, lot 1, N 1/2 NE 1/4;
 Sec. 33, lots 2-4, NE 1/4, E 1/2 NW 1/4,
 NE 1/4 SW 1/4, N 1/2 SE 1/4;
 Sec. 34, all;
 Sec. 35, lots 1,2, W 1/2 NW 1/4, N 1/2 SW 1/4;
 T. 22 S., R. 5 E., Sec. 3, lots 1-4, S 1/2 N 1/2, NE 1/4 SW 1/4,
 S 1/2 SW 1/4, N 1/2 SE 1/4, SW 1/4 SE 1/4.

Sec. 4, lots 1,2, S 1/2 NE 1/4, SE 1/4 SE 1/4;
 Sec. 9, NE 1/4 NE 1/4;
 Sec. 10, W 1/2 NE 1/4, NW 1/4, N 1/2 SW 1/4.

Containing 9,905.46 acres.

Fee Land

T. 21 S., R. 5 E., Sec. 29, W 1/2, W 1/2E 1/2;
 Sec. 30, S 1/2 NE 1/4, E 1/2 SE 1/4.

Containing 640 acres.

The LMU includes the following Federal coal leases described in Exhibit B attached: SL-062583, U-062453, U-0149084, U-28297, U-47080, and U-63214.

2. UNIT OPERATOR: Southern Utah Fuel Company
 397 South 800 East
 Salina, Utah 84654

3. STIPULATIONS: As a consideration to the approval of this LMU, the operator/lessee consents to the following stipulations which make all Federal coal leases within the LMU subject to uniform requirements of the Resource Recovery and Protection Plan (R2P2), LMU recoverable reserves exhaustion, diligent development, continued operation, maximum economic recovery, advanced royalty and royalty reporting reports. As of April 2, 1990, the diligence term and conditions of the Federal coal leases are subject to or are superseded by the diligence requirements imposed on the LMU.

a. SUPERVISION: The Bureau of Land Management
 Moab District office
 82 East Dogwood Lane
 Moab, Utah 84532

is responsible for the review and approval of exploration plans and ions, and modifications, thereto, prior to the commencement of the operation within the permit area approved pursuant to the Surface Mining control and Reclamation Act of 1977. The Assistant District manager is responsible for review and approval of R2P2s and modifications thereto. The Assistant District Manager is also responsible for inspection and enforcement, including production verification of such operations and all lands and all coal contained in the LMU, and for implementing all other applicable provisions of 43 CFR 3400.

b. DILIGENT DEVELOPMENT AND CONTINUED OPERATION: Pursuant to 43 CFR 3480.0-5(a)(13)(ii)(B), the diligent development period for the LMU began effective July 1, 1989. Therefore, the LMU must have production of commercial quantities (one

percent of the recoverable reserves) by July 1, 1999. SUFCo must mine 1,292,900 tons from anywhere within the LMU to achieve diligent development and yearly thereafter to maintain continued operation or request to be allowed to pay advanced royalties in lieu of continued operation.

c. ADVANCE ROYALTY: The number of years for which advance royalty may be paid in lieu of continued operation is ten. Advance royalty may be paid in lieu of continued operation only until July 1, 2009. No advance royalty paid prior to that date may be credited against production royalty after that date.

d. REPORTING PERIOD: Rental for Federal coal leases continued in the LMU will be due, in a lump sum, annually on the anniversary date of the LMU approval, April 2, 1990. Upon approval and for the duration of this LMU, no Federal rentals may be credited against production royalties for any Federal coal lease contained in the LMU, even though the Federal coal lease terms may have allowed for such credits prior to the effective date of the LMU.

Royalties for Federal recoverable coal reserves produced within the LMU will be paid on the appropriate Minerals Management Service (MMS) Production and Operation reports every royalty reporting period. The LMU royalty reporting period will be on a monthly basis beginning with the royalty period after the date that coal is first produced following the effective date of the LMU approval. If coal is being produced on the effective date of the LMU approval, the first royalty reporting period will begin on the first day of the month following the effective date of the LMU. Since production within an LMU is credited to the entire LMU, a certified record of all non Federal LMU coal production must be provided to the District Manager on an annual basis. Progress maps and reports required by 43 CM 3495.1 shall show all Federal and non Federal production from anywhere within the LMU.

e. RECOVERABLE COAL RESERVES EXHAUSTION: The 40-year LMU recoverable coal reserves exhaustion period commences the date that coal is first produced from the LMU, following the effective date of LMU approval. If there is production occurring within the LMU on the effective date of LMU approval, the 40-year clock begins on the effective date of LMU approval.

f. If the LMU, of which Federal coal leases SL-062583, U-062453, U-0149084, U-47080, U-28297, and U-63214 are part fails for whatever reason, the above-mentioned leases will automatically be subject to the diligence provisions that otherwise would have applied had they not been included in an LMU.

Coastal States Energy Company
Company of Lessee Name

Southern Utah Fuel Company
Unit Operator

By /s/ Unintelligible
(signature of Lessee)

By /s/ Unintelligible
(signature of Unit Operator)

Senior Vice President
Title

General Manager
Title

June 24, 1993
Date

June 24, 1993
Date

[GRAPHIC OMITTED]

LEASES COMPRISING THE SUFCO LMU
SEVIER COUNTY, UTAH

SUFCO LMU

Exhibit "B"

FEDERAL LEASE:

Serial Number: SL-062583

Lease Effective Date: September 11, 1941

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 21 S., R. 4 E.,	Sec. 36, S 1/2.
T. 21 S., R. 5 E.,	Sec. 31, all.
T. 22 S., R. 4 E.,	Sec. 1, lots 1-4, S 1/2 N 1/2, S 1/2 Sec. 12, NW 1/4.
T. 22 S., R. 5 E.,	Sec. 6, all; Sec. 7, N 1/2 NE 1/4, E 1/2 NW 1/4.

Containing: 2,199.83 acres.

FEDERAL LEASE:

Serial Number: U-062453

Lease Effective Date: March 1, 1962

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 21 S., R. 5 E.,	Sec. 28, SW 1/4 SW 1/4; Sec. 29, SE 1/4 SE 1/4; Sec. 32, N 1/2; Sec. 33, W 1/2 NW 1/4.
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Containing: 480 acres.

FEDERAL LEASE:

Serial Number: U-0149084

Lease Effective Date: June 1, 1966

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 22 S., R. 4 E., Sec. 12, NE 1/4, N 1/2 SE 1/4.

Containing: 240 acres.

FEDERAL LEASE:

Serial Number: U-47080

Lease Effective Date: October 1, 1981

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 21 S., R. 4 E., Sec. 25, all;
 Sec. 36, N 1/2.
 T. 21 S., R. 5 E., Sec. 30, lots 2-4, W 1/2 SE 1/4.

Containing: 1,158.05 acres.

FEDERAL LEASE:

Serial Number: U-28297

Lease Effective Date: January 1, 1979

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 21 S., R. 5 E., Sec. 32, lots 1-4, N 1/2 S 1/2;
 Sec. 33, lot 1, NW 1/4 SW 1/4.
 T. 22 S., R. 5 E., Sec. 4, lot 4, SW 1/4 NW 1/4, W 1/2
 SW 1/4;
 Sec. 5, all;
 Sec. 7, S 1/2 NE 1/4, E 1/2 SW 1/4,
 SE 1/4;
 Sec. 8, all;
 Sec. 17, NE 1/4, N 1/2 NW 1/4;
 Sec. 18, NE 1/4, E 1/2 NW 1/4.

Containing: 2,631.98 acres.

FEDERAL LEASE:

Serial Number: U-63214

Lease Effective Date: July 1, 1989

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 21 S., R. 4 E., Sec. 12, E 1/2 SE 1/4;
 Sec. 13, E 1/2 NE 1/4, S 1/2;
 Sec. 14, E 1/2 SW 1/4, SE 1/4;
 Sec. 23, E 1/2, E 1/2 W 1/2;
 Sec. 24, all.

T. 21 S., R. 5 E., Sec. 15, W 1/2;
 Sec. 16, all;
 Sec. 17, all;
 Sec. 18, all;
 Sec. 19, all;
 Sec. 20, all;
 Sec. 21, all;
 Sec. 22, W 1/2;
 Sec. 26, W 1/2 NW 1/4 SW 1/4, SW 1/4 SW 1/4;
 Sec. 27, all;
 Sec. 28, N 1/2, N 1/2 SW 1/4, SE 1/4 SW 1/4,
 SE 1/4;
 Sec. 29, E 1/2 NE 1/4, NE 1/4 SE 1/4;
 Sec. 30, lot 1, N 1/2 NE 1/4;
 Sec. 33, lots 2-4, NE 1/4, E 1/2 NW 1/4,
 NE 1/4 SW 1/4, N 1/2 SE 1/4,
 Sec. 34, all;
 Sec. 35, lots 1,2, W 1/2 NW 1/4, N 1/2
 SW 1/4;

T. 22 S., R. 5. E., Sec. 3, lots 1-4, S 1/2 N 1/2, NE 1/4
 SW 1/4, S 1/2 SW 1/4, N 1/2 SE 1/4,
 SW 1/4 SE 1/4.
 Sec. 4, lots 1,2, S 1/2 NE 1/4, SE 1/4
 SE 1/4;
 Sec. 9, NE 1/4 NE 1/4;
 Sec. 10, W 1/2 NE 1/4, NW 1/4, N 1/2 SW 1/4.

Containing: 9,905-46 acres.

FEE LAND

Description of Land committed:

T. 21 S., R. 5 E., Sec. 29, W 1/2 E 1/2, W 1/2;
 Sec. 30, S 1/2 NE 1/4, E 1/2 SE 1/4.

Containing 640 acres.

EXHIBIT 10.18

SKYLINE LOGICAL MINING UNIT

The Mineral Leasing Act (MLA) of February 25, 1920, as amended by the Federal Coal Leasing Amendments Act (FCLAA) of 1976, authorizes the consolidation of coal leases into a logical mining unit (LMU). An LMU is an area of land in which the coal resources can be developed in an efficient, economical and orderly manner as a unit with due regard to conservation of coal resources and other resources.

As a result of an application for an LMU designation filed by Utah Fuel Company, the Skyline LMU is approved effective August 1, 1988 and provides as follows:

1. UNIT AREA: The area specified on the map attached hereto marked Exhibit A is hereby designated the LMU area, containing 6,367.14 acres as described as follows:

T. 13 S., R. 6 E., SLM, Utah

Sec. 10, lots 3, 4, E 1/2 SW 1/4, SE 1/4;

Sec. 11, S 1/2 S 1/2;

Sec. 13, lots 1-8;

Secs. 14, 15, 22, 23, all;

Sec. 24, W 1/2;

Sec.25, beginning at the SW

corner; thence N. 0(Degree)

07' W. 74.9 chains along the

west section line to the NW

corner; thence East 40.1

chains along the north

section line to the N 1/4

corner; thence S. 28(Degree)

03' 38" W. 85 chains, more or

less, to the point of

beginning;

Sec. 26, all;

Sec. 27, all, (excluding reservoir R/W SL-062389);

Sec. 34, all, (excluding reservoir R/W SL-062389);

Sec. 35, all.

The LMU includes the following Federal coal leases described in Exhibit B attached: U-073120, U-0142235, U-020305, U-0147570, and U-044076.

2. UNIT OPERATOR: Utah Fuel Company
175 East 400 South, Suite 800
Salt Lake City, Utah 84111

3. STIPMATIONS: As a consideration to the approval of the LMU, the operator/lessee consents to the following stipulations which make all Federal leases within the LMU

subject to uniform requirements of this Resource Recovery and Protection Plan (R2P2), LMU recoverable reserves exhaustion, diligent development, continued operation, maximum economic recovery, advance royalty and royalty reporting periods. As of August 1, 1988, the diligence terms and conditions of the Federal lease are subject to or are superseded by the diligence requirements imposed on the LMU.

- A. SUPERVISION: Bureau of Land Management
Moab District Office
82 East Dogwood
P. O. Box 970
Moab, Utah 84532

The District Manager located at the above location is responsible for the review and approval of exploration plans and operations, and modifications thereto, prior to the commencement of mining operations within a permit area approved pursuant to the Surface Mining Control and Reclamation Act (SMCRA) of 1977. The District Manager is also responsible for review and approval of resource recovery and protection plans and modifications thereto, and is also responsible for inspection and enforcement, including production verification, of such operations and all lands and all coal within the LMU, and for implementing all other applicable provisions of the 43 CFR 3400 rules.

- B. DILIGENT DEVELOPMENT AND CONTINUED OPERATION: Pursuant to 43 CFR 3480.0-5 (a)(13)(ii)(B), the diligent development period for the LMU began on May 1, 1986. Therefore, the LMU must have production of commercial quantities (It of the total recoverable reserves) by May 1, 1996. Utah Fuel Company must mine 986,470 tons from anywhere within the LMU to achieve diligent development and, thereafter, to maintain continued operation or request to be allowed to pay advance royalty in lieu of continued operation.
- C. ADVANCE ROYALTY: The number of years for which advanced royalty may be paid in lieu of continued operation is ten (10). Advance royalty may be paid in lieu of continued operation only until May 1, 2006. No advanced royalty paid prior to that date may be credited against production royalty after that date.
- D. REPORTING PERIOD: The rental amount for Federal coal leases is to be prorated to the effective date of the LMU. Thereafter, rental for Federal coal leases contained in the IXU will be due, in a lump sum, annually on the anniversary date of the LMU approval, August 1, 1988. Upon approval and for the duration of this LMU, no Federal rentals may be credited against production royalties for any Federal coal lease contained in the LMU, even though the Federal coal lease terms may have allowed for such credits prior to the effective date of the LMU.

Royalties for Federal recoverable coal reserves produced within the LMU will be paid on the appropriate Minerals Management Service (MMS) Production and

Operations reports every royalty reporting period. The LMU royalty reporting period will be on a monthly basis beginning with the royalty period after the date that coal is first produced following the effective date of the LMU approval. If coal is being produced on the effective date of LMU approval, the first royalty reporting period will begin on the first day of the month following the effective date of the LMU. Since all production within an LMU is credited to the entire LMU, a certified record of all non-Federal LMU coal production must be provided to the District Manager on an annual basis. Progress maps and reports required by 43 CFR 3483.2 shall show all Federal and non-Federal production from anywhere within the LMU.

- E. RECOVERABLE COAL RESERVES EXHAUSTION: The 40-year LMU recoverable coal reserves exhaustion period commences the date that coal is first produced from the LMU, following the effective date of LMU approval. if there is production occurring within the LMU on the effective date of LMU approval, the 40-year clock begins on the effective date of LMU approval.
- F. OTHER: If the LMU, of which Federal coal leases U-073120, U-0142235, U-020305, U-0147570, and U-044076 are a part, fails for whatever reason, the above mentioned leases will automatically be subject to the diligence provisions that otherwise would have applied had they not been included in an LMU.

COASTAL STATES ENERGY COMPANY

UTAH FUEL COMPANY
Unit Operator

By _____

 Title

 Date

By _____

 Title

 Date

KANAWHA & HOCKING COAL & COKE CO.

By _____

 Title

 Date

SEE SEPARATE
CONCURRENCE
DOCUMENT

[GRAPHIC OMITTED]

CONCURRENCE DOCUMENT
OF DECISION DATED
NOVEMBER 9, 1993

THE UNDERSIGNED CONCUR THAT THE JULY 28, 1989 AGREEMENT IS STILL
VALID AND IN EFFECT WITH NO OBJECTION TO INCLUSION OF COAL LEASE
U-073120 INTO THE SKYLINE LOGICAL MINING UNIT APPROVAL.

Authorized Officer - David E. Lung, Secretary/Treasurer
Kanawha & Hocking Coal and Coke- Company

SKYLINE LMU

EXHIBIT "B"

FEDERAL LEASE:

Serial Number: U-073120

Lease Effective Date: February 1, 1964

Lessee: Kanawha and Hocking Coal and Coke Company

Description of Land Committed:

T. 13 S., R. 6 E., SLM, Utah
Sec. 13, lots 1-6, and 8;
Sec. 14, NE 1/4, N 1/2 SE 1/4;
Sec. 24, NE 1/4 NW 1/4.

Acres: 557.22

FEDERAL LEASE:

Serial Number: U-0142235

Lease Effective Date: October 1, 1964

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 13 S., R. 6 E., SLM, Utah
Sec. 11, S 1/2 S 1/2;
Sec. 14, W 1/2, SW 1/4 SE 1/4.

Acres: 520.00

FEDERAL LEASE:

Serial Number: U-0147570

Lease Effective Date: May 1, 1965

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 13 S., R. 6 E., SLM, Utah
Sec. 10, lots 3, 4, E 1/2 SW 1/4, SE 1/4;
Sec. 15, lots 1-4, E 1/2, E 1/2 W 1/2;
Sec. 23, W 1/2 E 1/2, W 1/2.

Acres: 2,092.70

FEDERAL LEASE:

Serial Number: U-020305

Lease Effective Date: March 1, 1962

Lessee: Coastal States Energy Company

Description of Land Committed:

T 13 S., R. 6 E. , SLM, Utah
Sec. 13, lot 7;
Sec. 14, SE 1/4 SE 1/4;
Sec. 23, E 1/2 E 1/2;
Sec. 24, W 1/2 NW 1/4, SE 1/4 NW 1/4, S 1/2;
Sec. 25, Beginning at the SW corner; thence N.
0(Degree) 06' 47" W. along the west section
line 74.948 chains to the NW corner; thence
N. 89(Degree) 57' 47" E. along the north
section line 40.114 chains to the N 1/4
corner; thence S. 28(Degree) 03' 38" W. for
a distance of 84.961 chains to the point of
beginning;
Sec. 26, E 1/2 E 1/2.

Acres: 829.40

FEDERAL LEASE:

Serial Number: U-044076

Lease Effective Date: September 1, 1965

Lessee: Coastal States Energy Company

Description of Land Committed:

T. 13 S., R. 6 E., SLM, Utah
Sec. 26, W 1/2 E 1/2, W 1/2;
Sec. 27, lots 1-4, E 1/2, E 1/2 W 1/2,
(excluding reservoir R/W SL-062389);
Sec. 34, lots 1-8, S 1/2, (excluding reservoir
R/W SL-062389);
Sec. 35, all.

Acres: 2,367.82

EXHIBIT 10.19

Soldier Creek Logical Mining Unit

The Mineral Leasing Act (MLA) of February 25, 1920, as amended by the Federal Coal Leasing Amendments Act (FCLAA) of 1976, authorizes the consolidation of coal leases into a logical mining unit (LMU). An LMU is an area of land which the coal resources can be developed in an efficient, economical and orderly manner as a unit with due regard to conservation of coal resources and other resources.

As a result of a modification to an application for an LMU designation filed by Coastal States Energy Company, the Soldier Creek LMU is approved effective March 1, 1996, and provides as follows:

1. Unit Area: The area specified on the map attached hereto marked Exhibit A being hereby designated the LMU area, containing 12,142.5 acres as described as follows:

Federal Coal Lease SL-051279-063188

T. 13 S., R. 11 E., SLM, Utah
Sec. 12, E1/2 E1/2;
Sec. 13, NE1/4 NE1/4.

T. 13 S., R. 12 E., SLM, Utah
Sec. 7, lots 1 through 4, E1/2 W1/2 , E1/2;
Sec. 8, W1/2;
Sec. 17, W1/2;
Sec. 18, lot 1, N1/2 NE1/4, SE1/4 NE1/4, NE1/4 NW1/4.

Contains 1548.31 acres

Federal Coal Lease U-07064-027821

T. 13 S., R. 12 E., SLM, Utah
Sec. 13, S1/2;
Sec. 23, E1/2 E1/2, W1/2 SE1/4, NE1/4 SW1/4;
Sec. 24, all;
Sec. 25, N1/4 N1/4;
Sec. 26, N1/2 NE1/4.

T. 13 S., R. 13 E., SLM, Utah
Sec. 18, lots 3,4, E1/2 SW1/4, SE1/4;
Sec. 19, lots 1-4, E1/2 W1/2, NE1/4, NW1/4 SE1/4;
Sec. 30, lot 1.

Contains 2416.14 acres more or less

Federal Coal Lease U-50722

T. 13 S., R. 11 E., SLM, Utah
Sec. 1, lot 8;
Sec. 12, E1/2 W1/2 , W1/2 E1/2;
Sec. 13, NW1/4 NE1/4, NE1/4 NW1/4.

Contains 440 acres more or less.
Federal Coal Lease UTU-69635

T. 13 S., R. 11 E., SLM, Utah
Sec. 1, lots 1-7 and 8 (for all coal except the Rock
Cyn. Bed);
Sec. 10, E1/2 E1/2;
Sec. 11, all;
Sec. 12, W1/2 W1/2;
Sec. 13, W1/2 NW1/4, SE1/4 NW1/4, SW1/4;
Sec. 14, N1/2, N1/2 S1/2, SE1/4 SE1/4;
Sec. 15, NE1/4 NE1/4;
Sec. 23, N1/2 NE1/4 NE1/4;
Sec. 24, N1/2 N1/2 NW1/4.

Containing 2177.52 acres more or less

BLM Authorization to Mine

T. 13 S., R. 11 E., SLIVI, Utah
Sec. 13, SE1/4, NE1/4, NE1/4 SE1/4.

T. 13 S., R. 12 E., SLM, Utah
Sec. 18, S1/2 NW1/4.

Containing 120 acres more or less

State Lease

T. 13 S., R. 12 E., SLM, Utah
Sec. 8, E1/2;
Sec. 10, S1/2;
Sec. 11, S1/2;
Sec. 14, all;
Sec. 15, all;
Sec. 17, NE1/4, E1/2 SW1/4, SE1/4;
Sec. 20, E1/2 NW1/4, SW1/4 NW1/4, N1/2 NE1/4;
Sec. 21, N1/2 NW1/4, NE1/4;
Sec. 22, N1/2, N1/2 S1/2;
Sec. 23, W1/2 NW1/4

Containing 3640 acres more or less

Private Lands:

T. 13 S., R. 12 E., SLM, Utah
Sec. 23, W1/2 NE1/4, E1/2 NW1/4;
Sec. 16, all.

T. 13 S., R. 11 E., SLM, Utah
Sec. 2;

Sec. 3, lots 5,6,.7;
 Sec. 9, E1/2 NE1/4, SW1/4 NE1/4, N1/2 SE1/4;
 Sec. 10, NW1/4, W1/2 NE1/4, NW1/4 SW1/4, NW1/4 SE1/4.
 Containing 1752.2 acres more or less.

The LMU includes the following Federal coal leases described in Exhibit B attached: SL-051279063188, U-074064-027821, U-05722, UTU-69635.

2. Unit Operator:

Canyon Fuel Company, L.L.C.
 P.O. Box 1029
 Wellington, UT 84542

3. Stipulations: As a consideration to the approval of the LMU, the operator/lessee consents to the following stipulations which make all Federal leases within the LMU subject to uniform requirements of this Resource Recovery and Protection Plan (R2P2), LMU recoverable reserves exhaustion, diligent development, continued operation, maximum economic recovery, advance royalty and royalty reporting periods. As of March 1, 1996, the diligence terms and conditions of the Federal lease are subject to or are superseded by the diligence requirements imposed on the LMU.

a. Supervision:

Bureau of Land Management
 Price Field Office
 125 South 600 West
 P. O. Box 7004
 Price, Utah 84501

The Price Field Office Manager located at the above location is responsible for the review and approval of exploration plans and operations, and modifications thereto, prior to the commencement of mining operations within a permit area approved pursuant to the Surface Mining Control and Reclamation Act (SMCRA) of 1977. The Manager is also responsible for review and approval of resource recovery and protection plans and modifications thereto, and is also responsible for inspection and enforcement, including production verification, of such operations and all lands and all coal within the LMU, and for implementing all other applicable provisions of the 43 CFR 3400 rules for the LMU.

b. Diligent Development and Continued Operation requirements: Pursuant to 43 CFR 3480.0-5 (a) (13) (B), the diligent development period for the LMU began on October 1, 1995. Therefore, the LMU must have production of commercial quantities (1% of the total recoverable reserves) by October 1, 2005. Canyon Fuel Company L.L.C. must mine 664,000 tons from anywhere within the Solider Creek LMU to achieve diligent development. This requirement was met on January 1997. The LMU must maintain continued operation requirements (mining commercial quantities) or a request to be allowed to pay advance royalty in lieu of continued operation. This request must be submitted to BLM 30 days prior to the start of the continued operation year. Since the LMU has met the requirement for diligent development in January 1997, the LMU will be required to maintain production of commercial quantities on an annual basis. The continued operation period for this LMU began on February 1, 1997.

c. Advance Royalty: The number of years for which advanced royalty may be paid in lieu of continued operation is ten (10). Advance royalty may be paid in lieu of continued operation only until October 1, 2015. No advanced royalty paid prior to that date may be credited against production royalty after that date.

d. Reporting Period: The rental amount for Federal coal leases is to be prorated to the effective date of the LMU. Thereafter, rental for Federal coal leases contained in the LMU will be due, in a lump sum, annually on the anniversary date of the LMU approval, March 1, 1997. Upon approval and for the duration of this LMU, no Federal rentals may be credited against production royalties for any Federal coal lease contained in the LMU, even though the Federal coal lease terms may have allowed for such credits prior to the effective date of the LMU. Royalties for Federal recoverable reserves produced within the LMU will be paid on the appropriate Minerals Management Service (MMS) Production and Operations reports every royalty reporting period. The LMU royalty reporting period will be on a monthly basis beginning with the royalty period after the date that coal is first produced following the effective date of the LMU. If coal is being produced on the effective date of the LMU approval, the first royalty reporting period will begin on the first day of the month following the effective date of the LMU. Since all production within an LMU is credited to the entire LMU, a certified record of all non-Federal LMU coal production must be provided to the Price Office Manager on an annual basis. Progress maps and reports required by 43 CFR 3483.2 will show all Federal and non-Federal production from anywhere within the LMU.

e. Recoverable Coal reserves Exhaustion: The 40-year LMU recoverable coal reserves exhaustion period commences the date the coal is first produced from the LMU, following the effective date of LMU approval. If there is production occurring within the LMU on the effective date of LMU approval, the 40-year clock begins on the effective date of LMU approval.

f. Other: If the LMU of which Federal coal leases SL-051279-063188, U-074064-027821, U50722, UTU-69635 is a part, fails for whatever reason, the above-mentioned leases will automatically be applied had they not been included in an LMU.

Canyon Fuel Company. L.L.C.

Bureau of Land Management

By /s/ R D Pick

By /s/ Unintelligible

Title President and CEO

Title Acting, Deputy State Director,
Natural Resources

Date May 13, 1997

Date July 19 1997

BLACK THUNDER MINE LOGICAL MINING UNIT
CASPLMU16

The Mineral Leasing Act of February 25, 1920, as amended by the Federal Coal Leasing Amendments Act of 1976, authorizes the consolidation of coal leases into a logical mining unit (LMU). A (LMU) is an area of land in which the coal resources can be developed in an efficient, economical, and orderly manner as a unit with due regard to conservation of coal resources and other resources.

As a result of an application for an LMU filed by Thunder Basin Coal Company, the Black Thunder Mine LMU is hereby APPROVED EFFECTIVE MAY 1, 1995, and provides as follows:

1. The following area is hereby designated the LMU area, containing 9,566.725 acres described as follows based on the coal status survey plats in the Wyoming State Office of the Bureau of Land Management (BLM):

T. 42 N., R. 70 W., 6th P.M., Wyoming
Sec. 2: Lots 5-16;
Sec. 3: Lots 5-16;

T. 43 N., R. 70 W., 6th P.M Wyoming
Sec. 7: Lots 8 (S2), 13 (SW), 14-18,
19 (NW & S2);
Sec. 17: Lots 1-16;
Sec. 18: Lots 5-20;
Sec. 19: Lots 5-20;
Sec. 20: Lots 1-16;
Sec. 21: Lots 1-16;
Sec. 22: Lots 2, 3, 4 (W2W2), 9-13;
Sec. 27: Lots 2-14;
Sec. 28: Lots 1-16;
Sec. 29: Lots 1-16;
Sec. 30: Lots 5-20;
Sec. 31: Lots 5-12;
Sec. 32: Lots 1-8;
Sec. 33: Lots 1-10, 15, 16;
Sec. 34: Lots 1-16;
Sec. 35: Lots 2 (S2), 3-7, 9-16;

The unit includes the following Federal coal leases:

WYW2313	T. 42 N., R. 70 W., 6th P.M., Wyoming Secs. 2, 3;
	T. 43 N., R. 70 W., 6th P.M., Wyoming Secs. 17, 20-22, 27-29, 33-35.
	Containing 6,074.230 acres
WYW118907	T. 43 N., R. 70 W., 6th P.M., Wyoming Secs. 7, 18, 19, 29-33.
	Containing 3492.495 acres

2. UNIT OPERATOR, Thunder Basin Coal Company, a wholly owned subsidiary of Atlantic Richfield Company, P.O. Box 406, Wright, Wyoming 82732, is hereby designated as Unit Operator. Thunder Basin Coal Company is the lessee of Federal coal lease, WYW2313, and co-lessee of Federal coal lease, WYW118907.

3. STIPULATIONS, As a consideration to the approval of this LMU, the Unit Operator/lessee consents to the following stipulations which make all Federal coal leases within the LMU subject to uniform requirements for submittal of resource recovery and protection plans (R2P2), LMU recoverable coal reserves exhaustion, diligent development, continued operation, maxLMU economic recovery, advance royalty, and royalty reporting periods (but not royalty rates). As of the effective date of this LMU, the diligence terms and conditions of Federal coal leases, WYW2313 and WYW118907, are subject to or are superseded by the diligent development and continued operation requirements imposed on the LMU.

(a) SUPERVISION. The Casper District Manager of the Bureau of Land Management, Casper District Office, located at 1701 East E Street, Casper, WY 82601, is responsible for the:

- (1) review and approval of exploration plans and operations, and modifications thereto, prior to commencement of mining operations within a permit area approved pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA);
- (2) review and approval of resource recovery and protection plans (R2P2) and modifications thereto; and,

(3) inspection and enforcement, including production verification, of such operations and all lands and all coal within the LMU and for implementing all other applicable provisions of the 43 CFR Group 3400 rules.

(b) RESOURCE RECOVERY AND PROTECTION PLAN. The Black Thunder Mine presently has an approved resource recovery and protection plan (R2P2) and mine permit application covering the entire LMU. NO ADDITIONAL R2P2 SUBMITTAL IS REQUIRED AT THIS TIME.

(c) DILIGENT DEVELOPMENT AND CONTINUED OPERATION. Pursuant to 43 CFR 3480.0-5 (a) (13) (ii), the diligent development period for the LMU began on October 1, 1992, the effective date of Federal coal lease WYW118907. THE COMMERCIAL QUANTITIES DUE ON OR BEFORE OCTOBER 1, 2002, FOR THE LMU ARE SET OUT ON ATTACHMENT 'A'. Since all production which was credited toward diligent development or continued operation from either Federal coal lease will be credited toward LMU diligent development, continued operation commenced on the effective date of the LMU, May 1, 1995. The LMU continued operation year is May 1 through April 30. Thunder Basin Coal Company must maintain continued operation on the LMU or request to be allowed to pay advance royalty in lieu of continued operation.

(d) ADVANCE ROYALTY. The number of years for which advance royalty may be paid in lieu of continued operation is ten (10) years. Advance royalty may be paid in lieu of continued operation ONLY: UNTIL OCTOBER 1, 2012. No advance royalty paid prior to October 1, 2012, may be credited against production royalty after that date.

(e) REPORTING PERIOD. Pursuant to 43 CFR 3487.1(e) (3), the rental amount for each Federal coal lease is to be prorated to the effective date of the LMU which is May 1, 1995. Thereafter, the rentals for Federal coal leases WYW2313 and WYW118907 within the LMU will be due in lump sum on the anniversary of the effective date of LMU approval, May 1, 1995. Upon approval of the LMU and for the duration of the LMU, no Federal coal lease rentals may be credited against production royalties for any Federal coal lease contained in the LMU, the Federal coal lease terms of which allowed for such credits prior to the May 1, 1995, effective date of the LMU.

Royalties for Federal recoverable coal reserves produced within the LMU will be paid in lump sum, identified by individual Federal coal lease (WYW2313 and WYW118907) on the Report of Sales and Royalty Remittance, Solid Minerals - Form MMS 4014, and Solid Mineral Operations Report Part A - Production and Disposition of Raw Materials Form MMS 4059-A, every royalty reporting period. THE LMU ROYALTY REPORTING PERIOD WILL BE ON A CALENDAR MONTH BASIS.

The reports and royalty payments shall be due within thirty (30) days after the end of the reporting period. Since all production within an LMU is credited to the entire LMU, a certified record of all non-Federal LMU coal production must be provided to the Casper District Manager every royalty reporting period. Progress maps and reports required by 43 CFR 3482.3 shall show all Federal and non-Federal production from anywhere within the LMU.

(f) RECOVERABLE COAL RESERVES EXHAUSTION. The 40-year LMU recoverable coal reserves exhaustion period commences the date that coal is first produced from the LMU, following the effective date of LMU approval. If there is production occurring within the LMU on the effective date of LMU approval (May 1, 1995), the 40-year clock begins on the effective date of LMU approval.

(g) SECTION 3. For purposes of meeting the commercial quantities of 30 U.S.C. paragraph 201(a)(2)(A) (Section 3 of the Federal Coal Leasing Amendments Act of 1976) for all Federal coal leases within the LMU, production of any coal within the LMU shall be construed as occurring on all Federal coal leases within the LMU.

(h) FAILURE OF THE LMU. If the LMU, of which Federal coal leases, WYW2313 and WYW118907, are a part, fails for whatever reason(s), the Federal coal leases will automatically be subject to the diligence provisions that otherwise would have applied had the Federal coal leases not been included in the LMU.

(i) CULTURAL RESOURCES. (1) Before undertaking any activities that may disturb the surface of the leased lands, the Unit Operator/Lessee shall conduct a cultural resource intensive field inventory in a manner specified by the Authorized Officer of the BLM or of the surface managing agency, if different, on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archeologist, historian, historical architect, as appropriate), approved by the Authorized Officer of the surface managing agency (BLM, if the surface is privately owned), and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Assistant Director of the Western Support Center of the Office of Surface Mining, the Authorized Officer of the BLM, if activities are associated with coal exploration outside an approved mining permit area (hereinafter called Authorized Officer), and the Authorized Officer of the surface managing agency, if different. The Unit Operator/Lessee shall undertake measures, in accordance with instructions from the Assistant Director, or Authorized Officer, to protect cultural resources on the Federally leased lands included in the LMU. The Unit Operator/Lessee

shall not commence the surface disturbing activities until permission to proceed is given by the Assistant Director or Authorized Officer.

(2) The Unit Operator/Lessee shall protect all cultural resource properties within the Federally coal leased area included in the LMU from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation or exploration plan.

(3) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the Unit Operator/Lessee.

(4) If cultural resources are discovered during operations under this LMU, the Unit Operator/Lessee shall immediately bring them to the attention of the Assistant Director or Authorized Officer, or the Authorized Officer of the surface managing agency, if the Assistant Director is not available. The Unit Operator/Lessee shall not disturb such resources except as may be subsequently authorized by the Assistant Director or Authorized Officer. Within two (2) working days of notification, the Assistant Director or Authorized Officer will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries. The cost of data recovery for cultural resources discovered during LMU operations shall be borne by the surface managing agency unless otherwise specified by the Authorized Officer of the BLM or of the surface managing agency, if different.

(5) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

(j) PALEONTOLOGICAL RESOURCES. If paleontological resources, either large and conspicuous, and/or of significant scientific value are discovered during mining operations, the find will be reported to the Authorized Officer immediately. Mining operations will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological value. Mining operations within 250 feet of such discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The Unit Operator/Lessee will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the mining operations.

(k) MULTIPLE MINERAL DEVELOPMENT. Operations will not be approved which, in the opinion of the Authorized Officer, would unreasonably interfere with the orderly development and/or production from a valid existing mineral lease issued prior to the Federal coal leases included in the LMU for the same lands. Lessor reserves the right in accordance with applicable coal regulations administered by Lessor to require the Operator/Lessee to modify the Resource Recovery and Protection Plan (R2P2) to minimize conflicts with other resources and to maximize recovery of all resources.

(l) OIL AND GAS/COAL RESOURCES. The BLM realizes that coal mining operations conducted on Federal coal leases issued within producing oil and gas fields may interfere with the economic recovery of oil and gas; just as Federal oil and gas leases issued in a Federal coal lease area may inhibit coal recovery. BLM retains the authority to alter and/or modify the resource recovery and protection plans (R2P2) for coal operations and/or oil and gas operations on those lands covered by Federal mineral leases so as to obtain maximum resource recovery.

(m) RESOURCE RECOVERY AND PROTECTION. Any bypass of Federal coal previously determined to be economically recoverable under an approved Resource Recovery and Protection Plan (R2P2), must have the written approval of the Authorized Officer of the BLM in the form of an approved modification to the R2P2 prior to the Federal coal being bypassed. (43 CFR 3482.2(c)(2)) Failure to comply with this requirement shall result in the issuance of a Notice of Noncompliance by the Authorized Officer. The Notice of Noncompliance will include the amount of damages to be assessed for the unauthorized bypass of Federal coal as determined by the Authorized Officer. The Unit Operator/Lessee shall pay royalty for all coal not recovered which was available for mining and was economically recoverable by mining operations under an R2P2 approved by the Authorized Officer. The royalty shall be determined in accordance with Section 2. (a), PRODUCTION ROYALTIES, of Federal coal leases WYW2313 and WYW118907, and the value of the coal shall be determined as set forth in the applicable coal regulations administered by the Lessor. Federal coal not recovered, but which was available for recovery, will be volumetrically determined by the Authorized Officer using standard industry practices.

(n) RECORDS OF PRODUCTION AND SALES. The Unit Operator/Lessee will accurately determine the weight of all leased coal deposits mined (produced) and sold, will keep accurate records of such, and make those available to the Authorized Officer for inspection.

(o) PUBLIC LAND SURVEY PROTECTION. The Unit Operator/Lessee will protect all survey monuments, witness corners, reference monuments, and bearing trees against

destruction, obliteration, or damage during operations on the lease areas. If any monuments, corners or accessories are destroyed, obliterated, or damaged by this operation, the Unit Operator/Lessee will hire an appropriate county surveyor or registered land surveyor to reestablish or restore the monuments, corners, or accessories at the same location, using surveying procedures in accordance with the "Manual of Surveying Instructions for the Survey of the Public Lands of the United States." The survey will be recorded in the appropriate county records, with a copy sent to the Authorized Officer.

Unit Operator/Lessee:

Thunder Basin Coal Company, a wholly owned subsidiary of Atlantic Richfield Company

BY:

Date: _____

(Name)

(Title)

The Black Thunder Mine LMU is hereby approved effective May 1, 1995.

Date: _____

State Director

Attachment

1 - Attachment "A" contained in a sealed envelope.

L.Steele:snd:1/12/95:LMU16.DOC

WY 3400-6 (April 1985)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT COAL LEASE READJUSTMENT	Serial Number WYW3446 Date Lease Issued NOVEMBER 1, 1967
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PART I: LEASE RIGHTS GRANTED

This lease, entered into by and between the United States of America, hereinafter called the lessor, through the Bureau of Land Management, and

(Name and Address)

THUNDER BASIN COAL COMPANY
P.O. BOX 406
WRIGHT, WYOMING 82732

hereinafter called the lessee, is readjusted, effective NOVEMBER 1, 1997, for a period of 10 years and for so long thereafter as coal is produced in commercial quantities from the leased lands, subject to readjustment of lease terms at the end of each 10-year period.

Sec. 1. This lease readjustment is subject to the terms and provisions of the:

XX[] Mineral Lands Leasing Act of 1920, Act of February 25, 1920, as amended, 41 Stat. 437, 30 U.S.C. 181-287, hereinafter referred to as the Act;

[] Mineral Leasing Act for Acquired Lands, Act of August 7, 1947, 61 Stat. 913, 30 U.S.C. 351-359;

and to the regulations and formal orders of the Secretary of the Interior which are now or hereafter in force, when not inconsistent with the express and specific provisions herein.

Sec. 2. Lessor, in consideration of any rents and royalties to be paid, and the conditions and covenants to be observed as herein set forth, hereby grants to lessee the exclusive right and privilege to drill for, mine, extract, remove or otherwise process and dispose of the coal deposits in, upon, or under the following described lands in Campbell County, Wyoming:

T. 45 N., R. 70 W., 6th P.M., Wyoming	T. 46 N., R. 70 W., 6th P.M., Wyoming
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Sec. 4: Lots 7-10;	Sec. 17: Lots 1-16;
Sec. 5: Lots 5, 6, 11, 12;	Sec. 18: Lots 5, 6, 11-13, 18, 19, SENE;
	Sec. 19: Lots 5, 6, 11-14, 19, 20;
	Sec. 20: Lots 1-16;
	Sec. 21: Lots 1-16;
	Sec. 22: Lots 3-6, 11-14;
	Sec. 27: Lots 3-6, 11-14;
	Sec. 28: Lots 1-13;
	Sec. 29: Lots 1-12;
	Sec. 32: Lots 1-4, 9, 10, 15,16;
	Sec. 33: Lots 1-16;
	Sec. 34: Lots 3-6, 11-14.

containing 5917.990 acres, more or less, together with the right to construct such works, buildings, plants, structures, equipment and appliances and the right to use such on-lease rights-of-way which may be necessary and convenient to the exercise of the rights and privileges granted, subject to the conditions herein provided.

PART II. TERMS AND CONDITIONS

Sec. 1. (a) RENTAL RATE - Lessee shall pay lessor rental annually and in advance for each acre or fraction thereof during the continuance of the lease at the rate of \$3.00 for each lease year.

(b) RENTAL CREDITS - Rental shall not be credited against either production or advance royalties for any year.

Sec. 2 (a) PRODUCTION ROYALTIES - The royalty shall be 12 1/2 per cent of the value of the coal produced by strip or auger methods and 8 per cent of the value of the coal produced by underground mining methods. The value of the coal shall be determined as set forth in 43 CFR 3480. Royalties are due to lessor the final day of the month succeeding the calendar month in which the royalty obligation accrues.

(b) ADVANCE ROYALTIES - Upon request by lessee, the authorized officer may accept, for a total of not more than 10 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty shall be based on a percent of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the lessee requests approval to pay advance royalties in lieu of continued operation. Sec. 3. BONDS - Lessee shall maintain in the proper office a lease bond in the amount of \$344,000. The authorized officer may require an increase in this amount when additional coverage is determined appropriate.

Sec. 4. DILIGENCE - This lease is subject to the conditions of diligent development and continued operation, except that these conditions are excused when operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the lessee. The lessor, in the public interest, may suspend the condition of continued operation upon payment of advance royalties in accordance with the regulations in existence at the time of the suspension. Lessee's failure to produce coal in commercial quantities at the end of the 10 years shall terminate the lease. If not submitted already, lessee shall submit an operation and reclamation plan pursuant to Section 7 of the Act no later than 3 years after the effective date of this lease readjustment.

The lessor reserves the power to assent to or under the suspension of the terms and conditions of this lease in accordance with, INTER ALIA, Section 39 of the Mineral Leasing Act, 30 U.S.C. 209.

Sec. 5. LOGICAL MINING UNIT (LMU) - Either upon approval by the lessor of the lessee's application or at the direction of the lessor, this lease shall become an LMU or part of an LMU, subject to the provisions set forth in the regulations.

The stipulation established in an LMU approval in effect at the time of LMU approval will supersede the relevant inconsistent terms of this lease so long as the lease remains committed to the LMU. If the LMU of which this lease is a part is dissolved, the lease shall then be subject to the lease terms which would have been applied if the lease had not been included in an LMU.

Sec. 6. DOCUMENTS, EVIDENCE AND INSPECTION - At such times and in such form as lessor may prescribe, lessee shall furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost.

Lessee shall keep open at all reasonable times for the inspection of any duly authorized officer of the lessor, the leased premises and all surface and underground improvements, works, machinery, ore stockpits, equipment, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or under the leased lands.

Lessee shall allow lessor access to and copying of documents reasonably necessary to verify lessee compliance with terms and conditions of the lease.

While this lease remains in effect, information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 7. DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS - Lessee shall comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources.

Lessee shall not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area shall be submitted to the authorized officer.

Lessee shall carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage, or degradation to any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposit not leased hereunder, and to other land uses or users. Lessee shall take measures deemed necessary by lessor to accomplish the intent of this lease term. Such measures may include, but are not limited to modification to proposed siting or design of facilities, timing of operations, to itself the right to lease, sell or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorized future uses upon or in the leased lands, including issuing leases for minerals deposits not covered hereunder, and approving easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec. 8. PROTECTION OF DIVERSE INTEREST, AND EQUAL OPPORTUNITY - Lessee shall: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; restrict the workday to not more than 8 hours in any one day for underground workers except in emergencies; and take measure necessary to protect the health and safety of the public. No person under the age of 16 years shall be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in the paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors shall maintain segregated facilities.

Sec. 9. (a) TRANSFERS

XX[] This lease may be transferred in whole or in part to any person, association or corporation qualified to hold such lease interest.

[] This lease may be transferred in whole or in part to another public body, or to a person who will mine the coal on behalf of, and for the use of, the public body or to a person who for the limited purpose of creating a security interest in favor of a lender agrees to be obligated to mine the coal on behalf of the public body.

[] This lease may only be transferred in whole or in part to another small business qualified under 13 CFR 121.

Transfers of record title, working or royalty interest MUST be approved in accordance with the regulations.

(b) RELINQUISHMENT - The lessee may relinquish in writing at any time all rights under this lease or any portion thereof as provided in the regulations. Upon lessor's acceptance of the relinquishment, lessee shall be relieved of all future obligations under the lease or the relinquished portion thereof, whichever is applicable.

Sec. 10. DELIVERY OF PREMISES, REMOVAL OF MACHINERY, EQUIPMENT, ETC. - At such time as all portions of this lease are returned to lessor, lessee shall deliver up to lessor the land leased, underground timbering, and such other supports and structures necessary for the preservation of the mine workings on the leased premises or deposits and place all workings in condition for suspension or abandonment. Within 180 days thereof, lessee shall remove from the premises all

other structures, machinery, equipment, tools, and materials that it elects to or as required by the authorized officer. Any such structures, machinery, equipment, tools and materials remaining on the leased lands beyond 180 days or approved extension thereof, shall become the property of the lessor, but lessee shall either remove any or all such property or shall continue to be liable for the cost of removal and disposal in the amount actually incurred by the lessor. If the surface is owned by third parties, lessor shall waive the requirement for removal, provided the third parties do not object to such waiver. Lessee shall, prior to the termination of bond liability or at any other time when required and in accordance with all applicable laws and regulations reclaim all lands the surface of which has been disturbed, dispose of all debris or solid waste, repair the offsite and onsite damage caused by lessee's activity or activities incidental thereto, and reclaim access roads or trails.

Sec. 11. PROCEEDINGS IN CASE OF DEFAULT - If lessee fails to comply with applicable laws, existing regulations, or the terms, conditions and stipulations of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease shall be subject to cancellation by the lessor only by judicial proceedings. This provision shall not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver shall not prevent later cancellation for the same default occurring at any other time.

Sec. 12. HEIRS AND SUCCESSORS-IN-INTEREST - Each obligation of this lease shall extend to and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 13. INDEMNIFICATION - Lessee shall indemnify and hold harmless the United States from any and all claims arising out of the lessee's activities and operations under this lease.

Sec. 14. SPECIAL STATUTES - This lease is subject to the Federal Water Pollution Control Act (33 U.S.C. 1151-1175), the Clean Air Act (42 U.S.C. 1857 et. seq.), and to all other applicable laws pertaining to exploration activities, mining operations and reclamation, including the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et. seq.).

SEC. 15. SPECIAL STIPULATIONS -

In addition to observing the general obligations and standards of performance set out in the current regulations, the lessee shall comply with and be bound by the following special stipulations.

These stipulations are also imposed upon the lessee's agents and employees.

The failure or refusal of any of these persons to comply with these stipulations shall be deemed a failure of the lessee to comply with the terms of the lease. The lessee shall require his agents, contractors and subcontractors involved in activities concerning this lease to include these stipulations in the contracts between and among them. These stipulations may be revised or amended, in writing, by the mutual consent of the lessor and the lessee at any time to adjust to changed conditions or to correct an oversight.

(a) CULTURAL RESOURCES -

(1) Before undertaking any activities that may disturb the surface of the leased lands, the lessee shall conduct a cultural resource intensive field inventory in a manner specified by the authorized officer of the BLM or of the surface managing agency, if different, on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archeologist, historian, historical architect, as appropriate), approved by the authorized officer of the surface managing agency (BLM, if the surface is privately owned), and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Assistant Director of the Western Support Center of the Office of Surface Mining, the authorized officer of the BLM, if activities are associated with coal exploration outside an approved mining permit area (hereinafter called Authorized Officer), and the Authorized Officer of the surface managing agency, if different. The lessee shall undertake measures, in accordance with instructions from the Assistant Director, or Authorized Officer, to protect cultural resources on the leased lands. The lessee shall not commence the surface disturbing activities until permission to proceed is given by the Assistant Director or authorized officer.

(2) The lessee shall protect all cultural resource properties within the lease area from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation or exploration plan.

(3) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the lessee.

(4) If cultural resources are discovered during operations under this lease, the lessee shall immediately bring them to the attention of the Assistant Director or Authorized Officer, or the Authorized Officer of the surface managing agency, if the Assistant Director is not available. The lessee shall not disturb such resources except as may be subsequently authorized by the Assistant Director or Authorized Officer. Within two (2) working days of notification, the Assistant Director or Authorized Officer will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries. The cost of data recovery for cultural resources discovered during lease operations shall be borne by the surface managing agency unless otherwise specified by the Authorized Officer of the BLM or of the surface managing agency, if different.

(5) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

(b) PALEONTOLOGICAL RESOURCES - If paleontological resources, either large and conspicuous, and/or of significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological value. Operations within 250 feet of such discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The lessee will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operations.

(c) MULTIPLE MINERAL DEVELOPMENT - Operations will not be approved which, in the opinion of the Authorized Officer, would unreasonably interfere with the orderly development and/or production from a valid existing mineral lease issued prior to this one for the same lands.

(d) OIL AND GAS/COAL RESOURCES - The BLM realizes that coal mining operations conducted on Federal coal leases issued within producing oil and gas fields may interfere with the economic recovery of oil and gas; just as Federal oil and gas leases issued in a Federal coal lease area may inhibit coal recovery. BLM retains the authority to alter and/or modify the resource recovery and protection plans for coal operations and/or oil and gas operations on those lands covered by Federal mineral leases so as to obtain maximum resource recovery.

(e) RESOURCE RECOVERY AND PROTECTION - Notwithstanding the approval of a resource recovery and protection plan (R2P2) by the BLM, lessor reserves the

right to seek damages against the operator/lessee in the event (i) the operator/lessee fails to achieve maximum economic recovery (MER) (as defined at 43 CFR 3480.0-5(21)) of the recoverable coal reserves or (ii) the operator/lessee is determined to have caused a wasting of recoverable coal reserves. Damages shall be measured on the basis of the royalty that would have been payable on the wasted or unrecovered coal.

The parties recognize that under an approved R2P2, conditions may require a modification by the operator/lessee of that plan. In the event a coalbed or portion thereof is not to be mined or is rendered unmineable by the operation, the operator/lessee shall submit appropriate justification to obtain approval by the authorized officer (AO) to leave such reserves unmined. Upon approval by the AO, such coalbeds or portions thereof shall not be subject to damages as described above. Further, nothing in this section shall prevent the operator/lessee from exercising its right to relinquish all or portion of the lease as authorized by statute and regulation.

In the event the AO determines that the R2P2, as approved, will not attain MER as the result of changed conditions, the AO will give proper notice to the operator/lessee as required under applicable regulations. The AO will order a modification if necessary, identifying additional reserves to be mined in order to attain MER. Upon a final administrative or judicial ruling upholding such an ordered modification, any reserves left unmined (wasted) under that plan will be subject to damages as described in the first paragraph under this section.

Subject to the right to appeal hereinafter set forth, payment of the value of the royalty on such unmined recoverable coal reserves shall become due and payable upon determination by the AO that the coal reserves have been rendered unmineable or at such time that the operator/lessee has demonstrated an unwillingness to extract the coal.

The BLM may enforce this provision either by issuing a written decision requiring payment of the MMS demand for such royalties, or by issuing a notice of non-compliance. A decision or notice of non-compliance issued by the lessor that payment is due under this stipulation is appealable as allowed by law.

(f) PUBLIC LAND SURVEY PROTECTION - The lessee will protect all survey monuments, witness corners, reference monuments, and bearing trees against destruction, obliteration, or damage during operations on the lease areas. If any monuments, corners or accessories are destroyed, obliterated, or damaged by this operation, the lessee will hire an appropriate county surveyor or registered land surveyor to reestablish or restore the monuments, corners, or accessories at the same location, using surveying procedures in accordance with the "Manual of Surveying Instructions for the Survey of the Public Lands of the United States." The survey will be recorded in the appropriate county records, with a copy sent to the Authorized Officer.

EXHIBIT 10.22

MOUNTAIN COAL COMPANY

WEST ELK MINE

MODIFICATION OF
LOGICAL MINING UNIT (LMU)
APPLICATION - FEDERAL COAL
LEASES D-044569, C-0117192
COC-54558, AND C-1362

NOVEMBER, 1994

1.0 NAME AND ADDRESS OF THE DESIGNATED OPERATOR/LESSEE OF THE LMU:

Mountain Coal Company (MCC)
West Elk Mine
P.O. Box 591
Somerset, CO 81434
(303) 929-5015

2.0 FEDERAL COAL LEASES TO BE INCLUDED IN THE LMU:

D-0445692 Containing 1,187.61 acres and covering all coal in the following described lands.

Township 13 South, Range 90 West, 6th PM

Section 9: Lots 1, 2, and 3 and S1/2 SW1/4 SW1/4 or that part of the SW1/4 SW1/4 South of the North Fork of the Gunnison River.

Section 16: All, except the following described parcel: Beginning at the NW section corner of said Section 16 as monumented by a General Land Office brass cap and considering the line between said NW section corner and the N1/4 corner of said Section 16, as monumented by a General Land Office brass cap, to bear S 85(Degree) 21' 26" E, and running thence S 85(Degree) 21' 26" E along the north line of the NW1/4 of said Section 16, 2357.80 feet; thence S 01(Degree) 27' 42" W 1822.95 feet; thence S 38(Degree) 27' 16" W, 4072.21 feet to the SW corner of said Section 16 as monumented by a General Land Office brass cap; thence N 02(Degree) 30' 02" E along the west line of the SW1/4 of said Section 16, 2576.92 feet to the W1/4 corner of said Section 16 as monumented by a General Land Office brass cap; thence N 02(Degree) 32' 17" E along the west line of said NW1/4 of Section 16, 2630.28 feet to said NW Section corner of Section 16 and the point of beginning.

Section 21: All

Removal of coal limited to "F" Seam located west of Sylvester Creek in the following described lands:

Township 13 South, Range 90 West, 6th PM

Section 15: W1/2 W1/2 SW1/4

C-01171922 Containing 853.27 acres covering all coal in the following described lands:

Township 13 South, Range 90 West, 6th PM

Section 19: E1/2

Section 20: All, except the following described parcel:
Beginning at the NE section corner of said Section 20 as monumented by a General Land Office brass cap and considering the line between said NE section corner and the NIA corner of said Section 20, as monumented by a General Land Office brass cap, to bear N 87(Degree) 10' 19" W, and running thence N 87(Degree) 10' 19" W along said north line of the NE1/4 of Section 20, 2623.15 feet to the said N1/4 corner of Section 20; thence N 84(Degree) 39' 40" W along the north line of the NW1/4 corner of Section 20; thence N 84(Degree) 39' 40" W along the north line of the NW1/4 of Section 20, 236.00 feet; thence S 03(Degree) 08' 34" W, 630.00 feet; thence S 87(Degree) 10' 19" E, 910.00 feet; thence S 03(Degree) 08' 34" W, 660.00 feet; thence S 87(Degree) 10' 19" E, 1948.88 feet to a point on the east line of the said NE1/4 of Section 20; thence N 03(Degree) 08' 34" E along said east line of the NE1/4 of Section 20, 1279.64 feet to the said NE section corner of Section 20 and the point of beginning.

C-1362 2 Containing 4,836.36 acres and covering all coal in the following described lands:

Township 13 South, Range 90 West, 6th PM

Section 27: All (Lots 1-16 Incl.)

Section 28: All (Lots 1-16 Incl.)

Section 29: Lots 1-14 Incl.

Section 30: Lots 5, 6, and 9

Section 32: Lots 1-9 Incl., excluding 24.8 acres in independent reservoir.

Section 33: All (Lots 1-16 Incl.)

Section 34: All (Lots 1-16 Incl.)

Township 14 South, Range 90 West, 6th PM

Section 3: All (Lots 1, 2, 3, 4, S1/2 N1/2, S1/2)

Section 4: Lots 1, 2, 3, S1/2 NE1/4, SE1/4, E1/2 SW1/4,
SE1/4 NW1/4

Section 9: N1/2 NE1/4, SE1/4 NE1/4

Section 10: N1/2

COC-54558 Containing 1,011.64 acres and covering all coal in the lands:

Township 13 South, Range 90 West, 6th PM

Section 19: Lots 15-18, Incl.

Section 30: Lots 7 and 8

Township 13 South, Range 91 West, 6th PM

Section23: S1/2 S1/2 NE1/4, E1/2 SE1/4 SW1/4, and SE1/4

Section 24: S1/2 S1/2 NW1/4, and S1/2

Section 25: Lots 14, Incl.

Section 26: NE1/4 NE 1/4

Descriptions of the land including all coal beds considered of minable thickness, as well as descriptions of the geology, exploration drill holes and mineable areas of coal seams, have been previously submitted to BLM and are hereby incorporated by reference as follows:

- 1.) Mountain Coal Company, Mining and Reclamation Plan, Volumes 1 through 12 and including Volume 8A and the Permit Revision No. 5 application. This document comprises the West Elk Mine, Mine Surface Mining Reclamation and Control Act Permit under the Colorado Co-operative Agreement and serves as the basis for mine plan approval under the Mineral Leasing Act.
- 2.) Phase I and Phase II resource evaluation and supporting documents.

-
1. Mountain Coal Company is a wholly-owned subsidiary of Atlantic Richfield Company.
 2. Atlantic Richfield Company assigned these leases to its wholly-owned subsidiary, West Elk Coal Company, Inc., in 1984, which changed its name to Mountain Coal Company in 1991.

3.0 SURFACE OWNERSHIP:

The United States of America owns the surface of the above described leased lands except for the following:

Surface Owner: Atlantic Richfield Company
515 Flower Street
Los Angeles, CA 90071

Township 13 South, Range 90 West, 6th PM

Section 9: Lots 1, 2, and 3, and S/2SW/4SW/4 or that part of the SW/4SW/4 south of the North Fork of the Gunnison River, except fo the two parcels owned by the State Department of Highways described below. These highway right-of-way properties are located on the extreme Northern portion of the lease area. No mining is planned which will affect them.

Section 15: W/2W/2SW/4

Section 16: All

Section 21: Lots 1, 17, 20 and 22

Surface Owner: State Department of Highways
Division of Highways
State of Colorado
4201 E. Arkansas
Denver, CO 80222

Township 13 South, Range 90 West, 6th PM

A tract or parcel of land No. 5-A of the State Department of Highways, Division of Highways, State of Colorado, Project No. RS 0133(8) containing 4.13 acres, more or less, in the SE/4 of Section 9, said tract or parcel being more particularly described as follows:

Beginning at a point on the east line of Section 9 from which the Southeast corner of said Section 9 bears S. 1(Degree) 17' 30" W. a distance of 875.7 feet:

1. Thence N. 1(Degree) 17' 30" E. along said east line a distance of 334.3 feet to the center of the North Fork of the Gunnison River;
2. Thence N. 86(Degree) 42' W. along the centerline of said river a distance of 360.0 feet,

3. Then S. 63(Degree) 05' W. continuing along the centerline of said river a distance of 200.0 feet;
4. Thence S. 70(Degree) 11' W. continuing along the centerline of said river a distance of 364.3 feet;
5. Thence along the arc of a curve to the left, having a radius of 2,366.8 feet, a distance of 29.9 feet (the chord of this arc bears S. 78(Degree) 28' E. a distance of 29.9 feet);
6. Thence S. 81(Degree) 44' E. a distance of 355.6 feet;
7. Thence S. 83(Degree) 12' E. a distance of 338.8 feet;
8. Thence S. 74(Degree) 17' 30" E. a distance of 161.4 feet, more or less to the point of beginning.

A tract or parcel of land No. 4 of the State Department of Highways, Division of Highways, State of Colorado, Project No. RS 0133(8) containing 1.025 acres, more or less, in the SE/4SW/4 and the W/2SE/4 of Section 9, said tract or parcel being more particularly described as follows: Beginning at a point from which the S/4 corner of Section 9 bears S 4(Degree) 54' E., a distance of 1,200.3 feet:

1. Thence N. 87(Degree) 09' E. a distance of 333.0 feet;
2. Thence along the arc of a curve to the right, having a radius of 864.9 feet, a distance of 199.3 feet (the chord of this arc bears S. 79(Degree) 09' 30" E. a distance of 198.8 feet;
3. Thence S. 64(Degree) 52' 30" E. a distance of 332.8 feet to the centerline of the of the North Fork of the Gunnison River;
4. Thence N. 53(Degree) 35' W., continuing along said centerline, a distance of 314 feet;
5. Thence N. 82(Degree) 04' W., continuing along said centerline a distance of 309.0 feet;
6. Thence S. 85(Degree) 49' W., continuing along said centerline a distance of 385.0 feet;
7. Thence S. 58(Degree) 28' W., continuing along said centerline a distance of 119.4 feet;
8. Thence S. 83(Degree) 44' 30" E., a distance of 216.6 feet, more or less, to the point of beginning.

Surface Owner: Larry and Elaine Mautz
 1938 Highway 133
 Paonia, CO 81428

Township 13 South, Range 90 West, 6th PM

Section 19: E1/2 and Lots 15-18 Incl.

Section 20: N1/2, SW1/4

Township 13 South, Range 91 West, 6th PM

Section 23: S1/2S1/2NE1/4, E1/2SE1/4SW1/4, and SE1/4

Section 24: S1/2S1/2NW1/4, and S1/2

4.0 DESCRIPTION OF COAL SEAMS:

The modified LMU contains portions of three minable coal seams, the F, E, and B-Seams. The F-Seam averaged about 7 feet thick in the northern LMU area. Most of the F-Seam in the LMU area is unminable due to coal height, quality, geologic conditions, or a combination of these factors. Plate 1 shows the mined-out F-Seam.

The B-Seam is of minable thickness in the middle and northern portions of the LMU area. The B-Seam ranges from 19 feet to 26 feet thick in the LMU area. A portion of the B-Seam in which mining is precluded is overlain by mined out C-Seam. The interburden in this area is as low as 15 feet. Plate 2 shows the minable B-Seam area in the LMU.

The E-Seam minable area is predominately in the middle and southern portions of the LMU, as shown on Plate 3. The E-Seam minable area exists only in limited extent in the northern LMU area. The E-Seam averages approximately 9 feet thick in this area. The E-Seam splits and thins out to the west and northwest and is not minable in these areas.

Description of coal seams within the LMU to be mined and coal seams to be excluded from mining within the LMU can be found in the Mountain Coal Company, West Elk Mine, Mining and Reclamation Plan, Volume 1, Section 2.04.6. Accompanying maps and cross-sections can be found in Volumes 3 and 4.

Additional information on coal reserves can also be found in MCC Resource Evaluation, Phase I and II, and related information previously submitted to the BLM.

A summary of the recoverable coal reserves for Federal Coal Leases C-1362, C-0117192, D-044569, and COC-54558 as determined by the BLM is as follows:

LEASE NO. -----	RECOVERABLE RESERVES (MILLION OF TONS) -----
C-1362	71.650
C-0117192	9.210
D-044569	10.140
COC-54558	10.044 -----
TOTAL	101.044 -----

5.0 MER

Data to allow determination of MER has been previously submitted to the BLM in following documents:

- 1.) Mountain Coal Company, West Elk Mine, Mining and Reclamation Plan, Volumes 1 through 12, including Volumes 8A and the Permit Revision No. 5 application.
- 2.) Phase I and Phase II Resource Evaluation and associated documents.

6.0 40-YEAR MINEOUT PLAN

Enclosed Plates 1, 2, and 3 show mining of the LMU leases D-044569, C-0117192, C-1362, and COC-54558. Under the current mining scenario, the minable areas of the E and B-Seams will be depleted of recoverable reserves in 40 years or less at production rates ranging from 4.0 million tons per year to 5.4 million tons per year.

MOUNTAIN COAL COMPANY
WEST ELK MINE 11/94 MODIFIED LMU. COC 57201

c. DILIGENT DEVELOPMENT AND CONTINUED OPERATION: Pursuant to 43 CFR 3480.0-5(a)(13)(ii)(B), the diligent development period for the original LMU began on June 1, 1985. Continued operation year I (COYI) for the original LMU began on October 1, 1989. These dates shall be maintained for the LMU modification. To maintain production of commercial quantities for the LMU modification (which includes Recoverable Reserves from 2 additional federal leases), MCC must mine 1,010,440 tons raw coal each continued operation year, effective the start of COY7, October 1, 1995, from anywhere within the modified LMU to maintain continued operation or request to be allowed to pay advance royalty in lieu of continued operation.

d. ADVANCE ROYALTY: The number of times advance royalty may be paid is ten, ending May 31, 2005. No advance royalty paid prior to that date may be credited against production royalty after that date.

e. REPORTING PERIOD: The rental amount for each federal coal lease is to be prorated to the effective date of the modified LMU. Thereafter, the modified LMU rentals for all federal coal leases within the modified LMU will be due in lump sum on each annual anniversary of the effective date of modified LMU approval. Upon approval and for the duration of this modified LMU, no federal rentals may be credited against production royalties for any federal coal lease contained in the modified LMU, the federal coal lease terms of which allowed for such credits prior to the effective date of the modified LMU.

Royalties for federal recoverable coal reserves produced within the modified LMU will be paid in lump sum, identified by individual federal coal lease on the appropriate forms specified by the Minerals Management Service.

The modified LMU royalty reporting period will be on a monthly basis beginning the royalty reporting period after the date that coal is first produced from the modified LMU, following the effective date of modified LMU approval. If coal is being produced on the effective date of modified LMU approval, the first royalty reporting period will begin the first day of the month following the effective date of the modified LMU approval. Since all production within the modified LMU will come from federal leases, coal production must be provided to the Resource Arm Manager on a monthly basis showing production allocations to each lease. Progress maps and reports required by 43 CFR 3482.3 shall show all federal and nonfederal production from inside or outside the modified LMU.

f. RECOVERABLE COAL RESERVES EXHAUSTION: The 40-year LMU recoverable coal reserves exhaustion period commences the date that coal is first produced from the LMU, following the effective date of LMU approval (September 27, 1989). If there is production occurring within the LMU on the effective date of LMU approval, the 40-year clock begins on the effective date of LMU approval. The modified LMU 40-year clock also begins on the effective date of the original LMU approval.

MOUNTAW COAL COMPANY
WEST ELK MINE 11/94 MODIFIED LMU. CO 57201

g. OTHER: If the modified LMU, made up of federal leases D-044569, C-0117192, C-1362, and COC 54558, fails for whatever reason, each federal lease will automatically be subject to the diligence provisions that otherwise would have applied to them individually had they not been included in the modified LMU.

Mountain Coal Company

United States of America

BY: _____
(Signature of Lessee)

BY: _____
State Director

Title

Title

Date

Date

WY 3400-12
(April 1986)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number

WYW136458

COAL LEASE

PART I: LEASE RIGHTS GRANTED

This lease, entered into by and between the United States of America, hereinafter called the lessor, through the Bureau of Land Management, and (Name and Address)

Ark Land Company
CityPlace One, Suite 300
St. Louis, Missouri 63141
/s/ ML

hereinafter called the lessee, is readjusted, effective (date) Jan. 1, 1999, for a period of 0 years and for so long thereafter as coal is produced in commercial quantities from the leased lands, subject to readjustment of lease terms at the end of each 10-year period.

Sec. 1. This lease readjustment is subject to the terms and provisions of the:

XX/ / Mineral Lands Leasing Act of 1920, Act of February 25, 1920, as amended, 41 Stat. 437, 30 U.S.C. 181-287, hereinafter referred to as the Act;

/ / Mineral Leasing Act for Acquired Lands, Act of August 7, 1947, 61 Stat. 913, 30 U.S.C. 351-359;

and to the regulations and formal orders of the Secretary of the Interior which are now or hereafter in force, when not inconsistent with the express and specific provisions herein.

Sec. 2. Lessor, in consideration of any bonuses, rents and royalties to be paid, and the conditions and covenants to be observed as herein set forth, hereby grants and leases to lessee the exclusive right and privilege to drill for, mine, extract, remove or otherwise process and dispose of the coal deposits in, upon, or under the following described lands:

T.45 N., R. 70 W., 6th P.M., Wyoming
Sec. 4: Lots 8, 9, 15 thru 18;
Sec. 5: Lots 5 thru 20;
Sec. 6: Lots 8 thru 23;
Sec. 7: Lots 5 thru 7, 8 (N2), 9 thru 12,
13 (N2 & SE), 19 (NE);
Sec. 8: Lots 1 thru 16;
Sec. 9: Lots 3 thru 6, 11 thru 14;

T.43 N., R. 71 W., 6TH P.M., Wyoming
Sec. 1: Lots 5 thru 15, 16 (N2), 17 thru 19, SENE;
Sec. 12: Lots 1, 2 (NE)

containing 3545.503 acres, more or less, together with the right to construct such works, buildings, plants, structures, equipment and appliances and the right to use such on-lease rights-of-way which may be necessary and convenient to the exercise of the rights and privileges granted, subject to the conditions herein provided.

PART II. TERMS AND CONDITIONS

Sec. 1. (a) RENTAL RATE - Lessee shall pay lessor rental annually and in advance for each acre or fraction thereof during the continuance of the lease at the rate of \$3.00 for each lease year.

(b) RENTAL CREDITS - Rental shall not be credited against either production or advance royalties for any year.

Sec. 2 (a) PRODUCTION ROYALTIES - The royalty shall be 12.5 per cent of the value of the coal as set forth in the regulations. Royalties are due to lessor the final day of the month succeeding the calendar month in which the royalty obligation accrues.

(b) ADVANCE ROYALTIES - Upon request by lessee, the authorized officer may accept, for a total of not more than 10 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty shall be based on a percent of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the lessee requests approval to pay advance royalties in lieu of continued operation.

Sec. 3. BONDS - Lessee shall maintain in the proper office a lease bond in the amount of \$. The authorized officer may require an increase in this amount when additional coverage is determined appropriate.

Sec. 4. DILIGENCE - This lease is subject to the conditions of diligent development and continued operation, except that these conditions are excused when operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the lessee. The lessor, in the public interest, may suspend the condition of continued operation upon payment of advance royalties in accordance with the regulations in existence at the time of the suspension. Lessee's failure to produce coal in commercial quantities at the end of the 10 years shall terminate the lease. Lessee shall submit an operation and

reclamation plan pursuant to Section 7 of the Act no later than 3 years after lease issuance.

The lessor reserves the power to assent to or under the suspension of the terms and conditions of this lease in accordance with, inter alia, Section 39 of the Mineral Leasing Act, 30 U.S.C. 209.

Sec. 5. LOGICAL MINING UNIT (LMU) - Either upon approval by the lessor of the lessee's application or at the direction of the lessor, this lease shall become an LMU or part of an LMU, subject to the provisions set forth in the regulations.

The stipulation established in an LMU approval in effect at the time of LMU approval will supersede the relevant inconsistent terms of this lease so long as the lease remains committed to the LMU. If the LMU of which this lease is a part is dissolved, the lease shall then be subject to the lease terms which would have been applied if the lease had not been included in an LMU.

Sec. 6. DOCUMENTS, EVIDENCE AND INSPECTION - At such times and in such form as lessor may prescribe, lessee shall furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost.

Lessee shall keep open at all reasonable times for the inspection of any duly authorized officer of the lessor, the leased premises and all surface and underground improvements, works, machinery, ore stockpiles, equipment, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or under the leased lands.

Lessee shall allow lessor access to and copying of documents reasonably necessary to verify lessee compliance with terms and conditions of the lease.

While this lease remains in effect, information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 7. DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS - Lessee shall comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources.

Lessee shall not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area shall be submitted to the authorized officer.

Lessee shall carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage, or degradation to any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposit not leased hereunder, and to other land uses or users. Lessee shall take measures deemed necessary by lessor to accomplish the intent of this lease term. Such measures may include, but are not limited to modification to proposed siting or design of facilities, timing of operations, to itself the right to lease, sell or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorized future uses upon or in the leased lands, including issuing leases for minerals deposits not covered hereunder, and approving easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec. 8. PROTECTION OF DIVERSE INTEREST, AND EQUAL OPPORTUNITY - Lessee shall: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; restrict the workday to not more than 8 hours in any one day for underground workers except in emergencies; and take measure necessary to protect the health and safety of the public. No person under the age of 16 years shall be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in the paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors shall maintain segregated facilities.

Sec. 15. SPECIAL STIPULATIONS -

See Attached Pages

Sec. 9. (a) TRANSFERS

XX[] This lease may be transferred in whole or in part to any person, association or corporation qualified to hold such lease interest.

[] This lease may be transferred in whole or in part to another public body, or to a person who will mine the coal on behalf of, and for the se of, the public body or to a person who for the limited purpose of creating a security interest in favor of a lender agrees to be obligated to mine the coal on behalf of the public body.

[] This lease may only be transferred in whole or in part to another small business qualified under 13 CFR 121.

Transfers of record title, working or royalty interest must be approved in accordance with the regulations.

(b) RELINQUISHMENT - The lessee may relinquish in writing at any time all rights under this lease or any portion thereof as provided in the regulations. Upon lessor's acceptance of the relinquishment, lessee shall be relieved of all future obligations under the lease or the relinquished portion thereof, whichever is applicable.

Sec. 10. DELIVERY OF PREMISES, REMOVAL OF MACHINERY, EQUIPMENT, ETC. - At such time as all portions of this lease are returned to lessor, lessee shall deliver up to lessor the land leased, underground timbering, and such other supports and structures necessary for the preservation of the mine workings on the leased premises or deposits and place all workings in condition for suspension or

abandonment. Within 180 days thereof, lessee shall remove from the premises all other structures, machinery, equipment, tools, and materials that it elects to or as required by the authorized officer. Any such structures, machinery, equipment, tools and materials remaining on the leased lands beyond 180 days or approved extension thereof, shall become the property of the lessor, but lessee shall either remove any or all such property or shall continue to be liable for the cost of removal and disposal in the amount actually incurred by the lessor. If the surface is owned by third parties, lessor shall waive the requirement for removal, provided the third parties do not object to such waiver. Lessee shall, prior to the termination of bond liability or at any other time when required and in accordance with all applicable laws and regulations reclaim all lands the surface of which has been disturbed, dispose of all debris or solid waste, repair the offsite and onsite damage caused by lessee's activity or activities incidental thereto, and reclaim access roads or trails.

Sec. 11. PROCEEDINGS IN CASE OF DEFAULT - If lessee fails to comply with applicable laws, existing regulations, or the terms, conditions and stipulations of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease shall be subject to cancellation by the lessor only by judicial proceedings. This provision shall not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver shall not prevent later cancellation for the same default occurring at any other time.

Sec. 12. HEIRS AND SUCCESSORS-IN-INTEREST - Each obligation of this lease shall extend to and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 13. INDEMNIFICATION - Lessee shall indemnify and hold harmless the United States from any and all claims arising out of the lessee's activities and operations under this lease.

Sec. 14. SPECIAL STATUTES - This lease is subject to the Federal Water Pollution Control Act (33 U.S.C. 1151-1175), the Clean Air Act (42 U.S.C. 1857 et. seq.), and to all other applicable laws pertaining to exploration activities, mining operations and reclamation, including the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et. seq.).

SEC. 15. SPECIAL STIPULATIONS , Cont'd -

	The United States of America
Ark Land Company	By x /s/ A. Pierson
-----	-----
Company or Lessee Name	
X /s/ S. McCurdy	Alan R. Pierson
-----	-----
(Signature of Lessee)	(Signing Officer)
/s/ President	State Director
-----	-----
(Title)	(Title)
/s/ 12-2-98	December 18, 1998
-----	-----
(Date)	(Date)

=====
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.;
=====

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This form does not constitute an information collection as defined by 44 U.S.C. 3502 and therefore does not require OMB approval.
=====

SEC. 15. SPECIAL STIPULATIONS -

In addition to observing the general obligations and standards of performance set out in the current regulations, the lessee shall comply with and be bound by the following special stipulations.

These stipulations are also imposed upon the lessee's agents and employees. The failure or refusal of any of these persons to comply with these stipulations shall be deemed a failure of the lessee to comply with the terms of the lease. The lessee shall require his agents, contractors and subcontractors involved in activities concerning this lease to include these stipulations in the contracts between and among them. These stipulations may be revised or amended, in writing, by the mutual consent of the lessor and the lessee at any time to adjust to changed conditions or to correct an oversight.

(a) CULTURAL RESOURCES -

(1) Before undertaking any activities that may disturb the surface of the leased lands, the lessee shall conduct a cultural resource intensive field inventory in a manner specified by the authorized officer of the BLM or of the surface managing agency, if different, on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archeologist, historian, or historical architect, as appropriate), approved by the authorized officer of the surface managing agency (BLM, if the surface is privately owned), and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Assistant Director of the Western Support Center of the Office of Surface Mining, the authorized officer of the BLM, if activities are associated with coal exploration outside an approved mining permit area (hereinafter called Authorized Officer), and the Authorized Officer of the surface managing agency, if different. The lessee shall undertake measures, in accordance with instructions from the Assistant Director, or Authorized Officer, to protect cultural resources on the leased lands. The lessee shall not commence the surface disturbing activities until permission to proceed is given by the Assistant Director or authorized officer.

(2) The lessee shall protect all cultural resource properties within the lease area from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation or exploration plan.

(3) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the lessee.

(4) If cultural resources are discovered during operations under this lease, the lessee shall immediately bring them to the attention of the Assistant Director or Authorized Officer, or the Authorized Officer of the surface managing agency, if the Assistant Director is not available. The lessee shall not disturb such resources except as may be subsequently authorized by the Assistant Director or Authorized Officer.

Within two (2) working days of notification, the Assistant Director or Authorized Officer will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries. The cost of data recovery for cultural resources discovered during lease operations

shall be borne by the surface managing agency unless otherwise specified by the Authorized Officer of the BLM or of the surface managing agency, if different.

(5) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

(b) PALEONTOLOGICAL RESOURCES - If paleontological resources, either large and conspicuous, and/or of significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological value. Operations within 250 feet of such discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The lessee will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operations.

(c) MULTIPLE MINERAL DEVELOPMENT - Operations will not be approved which, in the opinion of the Authorized Officer, would unreasonably interfere with the orderly development and/or production from a valid existing mineral lease issued prior to this one for the same lands.

(d) OIL AND GAS/COAL RESOURCES - The BLM realizes that coal mining operations conducted on Federal coal leases issued within producing oil and gas fields may interfere with the economic recovery of oil and gas; just as Federal oil and gas leases issued in a Federal coal lease area may inhibit coal recovery. BLM retains the authority to alter and/or modify the resource recovery and protection plans for coal operations and/or oil and gas operations on those lands mineral leases so as to obtain maximum resource recovery.

(e) RESOURCE RECOVERY AND PROTECTION - Notwithstanding the approval of a resource recovery and protection plan (R2P2) by the BLM, lessor reserves the right to seek damages against the operator/lessee in the event (i) the operator/lessee fails to achieve maximum economic recovery (MER) (as defined at 43 CFR 3480.0-5(21)) of the recoverable coal reserves or (ii) the operator/lessee is determined to have caused a wasting of recoverable coal reserves. Damages shall be measured on the basis of the royalty that would have been payable on the wasted or unrecovered coal.

The parties recognize that under an approved R2P2, conditions may require a modification by the operator/lessee of that plan. In the event a coalbed or portion thereof is not to be mined or is rendered unminable by the operation, the operator/lessee shall submit appropriate justification to obtain approval by the authorized officer (AO) to leave such reserves unmined. Upon approval by the AO, such coalbeds or portions thereof shall not be subject to damages as described above. Further, nothing in this section shall prevent the operator/lessee from exercising its right to relinquish all or portion of the lease as authorized by statute and regulation.

In the event the AO determines that the R2P2, as approved, will not attain MER as the result of changed conditions, the AO will give proper notice to the operator/lessee as required under applicable regulations. The AO will order a modification if necessary, identifying additional reserves to be mined in order to attain MER. Upon a final administrative or judicial ruling upholding such an ordered modification, any reserves left unmined (wasted) under that plan will be subject to damages as described in the first paragraph under this section.

Subject to the right to appeal hereinafter set forth, payment of the value of the royalty on such unmined recoverable coal reserves shall become due and payable upon determination by the AO that the coal reserves have been rendered unmineable or at such time that the operator/lessee has demonstrated an unwillingness to extract the coal.

The BLM may enforce this provision either by issuing a written decision requiring payment of the MMS demand for such royalties, or by issuing a notice of non-compliance. A decision or notice of non-compliance issued by the lessor that payment is due under this stipulation is appealable as allowed by law.

(f) PUBLIC LAND SURVEY PROTECTION - The lessee will protect all survey monuments, witness comers, reference monuments, and bearing trees against destruction, obliteration, or damage during operations on the lease areas. If any monuments, comers or accessories are destroyed, obliterated, or damaged by this operation, the lessee will hire an appropriate county surveyor or registered land surveyor to reestablish or restore the monuments, comers, or accessories at the same location, using surveying procedures in accordance with the "Manual of Surveying Instructions for the Survey of the Public Lands of the United States." The survey will be recorded in the appropriate county records, with a copy sent to the Authorized Officer.

(g) RAILROAD RIGHT-OF-WAY - No mining activity of any kind may be conducted within the Burlington Northern/Chicago and Northwestern railroad right-of-way. The lessee shall recover all legally and economically recoverable coal from all leased lands not within the foregoing right-of-way. Lessee shall pay all royalties on any legally and economically recoverable coal which it fails to mine without the written permission of the Authorized Officer.

R2-FS-2820-13 (92)

Serial No. WYW136458

NOTICE FOR LANDS OF THE NATIONAL FOREST SYSTEM
UNDER JURISDICTION OF
DEPARTMENT OF AGRICULTURE

The permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of Interior in the permit. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of an exploration plan by the Secretary of the Interior, (2) uses of all existing improvements, such as forest development roads, within and outside the area permitted by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by an exploration plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed

to: District Ranger

at: 2250 East Richards Street, Douglas, WY 82633

Telephone: 307/358-4690

who is the authorized representative of the Secretary of Agriculture.

NOTICE

CULTURAL AND PALEONTOLOGICAL RESOURCES - The FS is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the FS, shall:

1. Contact the FS to determine if a site specific cultural resource inventory is required. If a survey is required, then:
2. Engage the services of a cultural resource specialist acceptable to the FS to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the FS for review and approval at the time a surface disturbing plan of operation is submitted.

- 3. Implement mitigation measures required by the FS and BLM to preserve or avoid destruction of cultural resource values. mitigation may include relocation of proposed facilities, testing, salvage, and recordation or other protective measures. All costs of the inventory and mitigation will be borne by the lessee or operator, and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

The lessee or operator shall immediately bring to the attention of the FS and BLM any cultural or paleontological resources or any other objects of scientific interest discovered as a result of surface operations under this lease, and shall leave such discoveries intact until directed to proceed by FS and BLM.

FOREST SERVICE REGION 2 SENSITIVE SPECIES - The Forest Service is responsible for assuring that the leased lands is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species listed as sensitive by the Regional Forester. The findings of this examination may result in some restrictions to the operator, a plan or even disallow use and occupancy that would lead to the listing of a sensitive species under the Endangered Species Act of 1973.

ENDANGERED OR THREATENED SPECIES - The FS is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or -threatened species or their habitats.

The lessee/operator may, unless notified by the FS that the above examinations are not necessary, conduct the examinations on the leased lands at his discretion and cost. These examinations must be done by or under the supervision of a qualified resource specialist approved by the FS. Acceptable reports must be provided to the FS identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats, and the anticipated effects and impacts to Forest Service Region 2 Sensitive species that may occur or have habitat in the area.

By: X /s/ S. McCurdy

President

(title)

EXHIBIT 10.30

ARCH COAL, INC.
OUTSIDE DIRECTORS'
DEFERRED COMPENSATION PLAN
EFFECTIVE JANUARY 1, 1999

1. PURPOSE

The purpose of this Arch Coal, Inc. Outside Directors' Deferred Compensation Plan (the "Plan") is to provide members of the Board who are not officers or employees of the Company with an opportunity to defer fees to be earned by them from the Company as a means of saving for retirement or other future purposes.

2. DEFINITIONS

The following definitions shall be applicable throughout the Plan:

(a) "Accounting Date" means each Business Day on which a calculation concerning a Participant's Fees Account is performed.

(b) "Beneficiary" means the person(s) designated by the Participant in accordance with Section 11, or if no person(s) is/are so designated, the estate of a deceased Participant.

(c) "Board" means the Board of Directors of Arch Coal, Inc. or its designee.

(d) "Business Day" means a day on which the New York Stock Exchange is open for trading activity.

(e) "Common Stock" means the common stock, \$.01 par value, of Arch Coal, Inc.

(f) "Common Stock Fund" means that investment option, approved by the Board, in which a Participant's Fees Account may be deemed to be invested and may earn income based on a hypothetical investment in Common Stock.

(g) "Company" means Arch Coal, Inc., its divisions, subsidiaries and affiliates.

(h) "Corporate Human Resources" means the Corporate Human Resources Department of the Company.

(i) "Credit Date" means the date on which Fees would otherwise have been paid to the Participant or, in the case of the Participant's designation of investment option changes, any

date within three Business Days after the Participant's designation is received by Corporate Human Resources, or as otherwise designated by the Board.

(j) "Deferred Fees" means the Fees elected by the Participant to be deferred pursuant to the Plan.

(k) "Election" means a Participant's delivery of a written notice of election to Corporate Human Resources electing to defer payment of all or a portion of his or her Fees either until Termination, death or such other time as further provided by the Board or the Company.

(l) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(m) "Fair Market Value" means the price of a share of Common Stock, as reported on the Composite Tape for New York Stock Exchange issues on the date and at the time designated by the Company.

(n) "Fees" means any fees earned as a director of the Company.

(o) "Fees Account(s)" means the Retirement Account and/or the In-Service Account(s).

(p) "Fiscal Year" means the fiscal year of the Company, which is currently the annual period commencing January 1 and ending the following December 31.

(q) "In-Service Account" means the account(s) to which the Participant's Deferred Fees are credited and from which, pursuant to Section 10(b), distributions are made.

(r) "Outside Director" means a member of the Board who is neither an officer nor employee of the Company.

(s) "Participant" means an Outside Director who has elected to defer payment of all or a portion of his or her Fees under the Plan.

(t) "Plan" means this Arch Coal, Inc. Outside Directors' Deferred Compensation Plan as it now exists or as it may hereafter be amended.

(u) "Retirement Account" means the account(s) to which the Participant's Deferred Fees are credited and from which, pursuant to Section 10(a), distributions are made.

(v) "Service Year" means the calendar year or portion thereof during which the services have been rendered for which Fees are payable.

(w) "Stock Unit(s)" means the share equivalents credited to the Common Stock Fund of a Participant's Fees Account pursuant to Section 6.

(x) "Termination" means termination of services as an Outside Director for any reason.

3. SHARES; ADJUSTMENTS IN EVENT OF CHANGES IN CAPITALIZATION

In the event of any change in the outstanding Common Stock of the Company by reason of any stock split, share dividend, recapitalization, merger, consolidation, reorganization, combination, or exchange or reclassification of shares, split-up, split-off, spin-off, liquidation or other similar change in capitalization, or any distribution to common shareholders other than cash dividends, the number or kind of shares or Stock Units that may be credited under the Plan shall be automatically adjusted so that the proportionate interest of the Participants shall be maintained as before the occurrence of such event. Such adjustment shall be conclusive and binding for all purposes of the Plan.

4. ELIGIBILITY

All Outside Directors shall be eligible to participate in the Plan.

5. ADMINISTRATION

Full power and authority to construe, interpret and administer the Plan shall be vested in the Company and the Board. This power and authority includes, but is not limited to, selecting investment indices, establishing deferral cycles for purposes of Section 10(b), establishing deferral terms and conditions, and adopting modifications, amendments and procedures as may be deemed necessary, appropriate or convenient by the Board. Decisions of the Company and the Board shall be final, conclusive and binding upon all parties. Day-to-day administration of the Plan shall be the responsibility of Corporate Human Resources.

6. PARTICIPANT ACCOUNTS

Upon election to participate in the Plan, there shall be established a Retirement Account and/or In-Service Account, as designated by the Participant, to which there shall be credited any Deferred Fees, as of each Credit Date. Each such Fees Account shall be credited (or debited) on each Accounting Date with income (or loss) based upon a hypothetical investment in any one or more of the investment options available under the Plan, as prescribed by the Board for the particular Fees credited, which may include a Common Stock Fund, as elected by the Participant under the terms of Section 9.

7. FINANCIAL HARDSHIP

Upon the written request of a Participant or a Participant's legal representative and a finding that continued deferral will result in an unforeseeable financial emergency to the Participant, the Board (in its sole discretion) may authorize (a) the payment of all or a part of a Participant's Fees Account in a single installment prior to his or her ceasing to be a Participant, or (b) the acceleration of payment of any multiple installments thereof. It is intended that the Board's determinations as to whether the Participant has suffered an "unforeseeable financial emergency" shall be made consistent with the requirements under Section 457(d) of the Internal Revenue Code of 1986, as amended.

8. ACCELERATED DISTRIBUTION

(a) Availability of Withdrawal Prior to Termination. The Participant or the Participant's Beneficiary, (provided the Participant has died) may elect, in writing, to withdraw all or a portion of such Participant's Fees Account at any time prior to the time such Fees Account otherwise becomes payable under the Plan, provided the conditions specified in Section 8(c), 8(d) and 8(e) hereof are satisfied.

(b) Acceleration of Periodic Distributions. Upon the written election of the Participant or the Participant's Beneficiary, such may elect to have all or a portion of installment payments being distributed to him or her in the form of an immediately payable lump sum, provided the conditions specified in Section 8(c) and 8(e) hereof are satisfied.

(c) Forfeiture Penalty. In the event of a withdrawal pursuant to Section 8(a), or an accelerated distribution pursuant to Section 8(b), the Participant shall forfeit from such Fees Account an amount equal to 10% of the amount of the withdrawal or accelerated distribution, as the case may be. The forfeited amount shall be deducted from the Fees Account prior to giving effect to the requested withdrawal or acceleration. Neither the Participant nor the Participant's Beneficiary shall have any right or claim to the forfeited amount, and the Company shall have no obligation whatsoever to the Participant, the Participant's Beneficiary or any other person with regard to the forfeited amount.

(d) Minimum Withdrawal. In no event shall the amount withdrawn in accordance with Section 8(a) be less than 25% of the amount credited to such Participant's Fees Account immediately prior to the withdrawal.

(e) Suspension from Deferrals. In the event of a withdrawal pursuant to Section 8(a) or 8(b), a Participant who is otherwise eligible to make deferrals of Fees under this Plan shall be prohibited from making such deferrals with respect to the remainder of the current Fiscal Year and the Fiscal Year of the Plan immediately following the Fiscal Year of the Plan during which the withdrawal was made, and any election previously made by the Participant with respect to deferrals of Fees for such Fiscal Years of the Plan shall be void and of no effect.

9. MANNER OF ELECTION

(a) General. An Outside Director may elect to participate in the Plan by delivering to Corporate Human Resources an Election on a form prescribed by Corporate Human Resources, designating the Fees Account to which the Deferred Fees are to be credited, electing the timing and form of distribution, and setting forth the manner in which such Deferred Fees shall be invested in accordance with Section 6 hereof. The timing of the filing of the appropriate form with Corporate Human Resources shall be determined by the Company or the Board. An effective election to defer Fees may not be revoked or modified except as otherwise determined by the Company or the Board or as stated herein.

(b) Investment Alternatives -- Existing Balances. A Participant may elect to change an existing selection as to the investment alternatives in effect with respect to an existing Fees Account (in increments prescribed by the Board) as often, and with such restrictions, as determined by the Board.

(c) Change of Beneficiary. A Participant may, at any time, elect to change the designation of a Beneficiary in accordance with Section 11 hereof.

10. DISTRIBUTION

(a) Retirement Account. A Participant's Retirement Account shall be distributed in cash at the time and in the manner elected by the Participant in his Election. If no Election is made by a Participant as to the distribution or form of payment of his or her Retirement Account, upon the Participant's death or Termination such account shall be paid in cash in a lump sum. The entire Retirement Account must be paid out within forty years following the date of the earliest of the Participant's death or Termination.

(b) In-Service Account. Deferred Fees credited to a Participant's In-Service Account shall be distributed in cash at the time and in the manner elected by the Participant in his Election. A Participant may make different Elections with respect to the applicable distribution periods for different deferral cycles in the In-Service Accounts.

(c) Change of Distribution of Fees Account. A Participant will be allowed to change the Election as to the distribution of his or her Retirement Account, subject to approval by the Board or the Company. Such change must be made by the earlier of:

(1) the date six months prior to the first day of the month following such Participant's Termination; or

(2) the December 31 immediately preceding the first day of the month following such Participant's Termination.

A Participant may not change the Election as to the distribution of Deferred Fees in his or her In-Service Account(s) except as otherwise set forth in Sections 7 and 8.

11. BENEFICIARY DESIGNATION

A Participant may designate one or more persons (including a trust) to whom or to which payments are to be made if the Participant dies before receiving distribution of all amounts due hereunder. A designation of Beneficiary will be effective only after the signed Election is filed with Corporate Human Resources while the Participant is alive and will cancel all designations of Beneficiary signed and filed earlier. If the Participant fails to designate a Beneficiary as provided above or if all of a Participant's Beneficiaries predecease him or her and he or she fails to designate a new Beneficiary, the remaining unpaid amounts shall be paid in one lump sum to the estate of such Participant. If all Beneficiaries of the Participant die after the Participant but before complete payment of all amounts due hereunder, the remaining unpaid amounts shall be paid in one lump sum to the estate of the last to die of such Beneficiaries.

12. UNSECURED GENERAL CREDITOR STATUS OF OUTSIDE DIRECTOR

The payments to Participants and their Beneficiaries hereunder shall be made from the general corporate assets of the Company. No person shall have any interest in any such assets by virtue of the provisions of this Plan. The Company's obligation hereunder shall be an unfunded and unsecured promise to pay money in the future. To the extent that any person acquires a right to receive payments from the Company under the provisions hereof, such right shall be no greater than the right of any unsecured general creditor of the Company; no such person shall have nor acquire any legal or equitable right, interest or claim in or to any property or assets of the Company. Any accounts maintained under this Plan shall be hypothetical in nature and shall be maintained for bookkeeping purposes only. Neither the Plan nor any account shall hold any actual funds or assets.

13. INALIENABILITY OF BENEFITS

The interests of the Participants and their Beneficiaries under the Plan may not in any way be voluntarily or involuntarily transferred, alienated or assigned, nor subject to attachment, execution, garnishment or other such equitable or legal process. A Participant or Beneficiary cannot waive the provisions of this Section 13.

14. GOVERNING LAW

The provisions of this plan shall be interpreted and construed in accordance with the laws of the State of Missouri, except to the extent preempted by Federal law.

15. AMENDMENTS

The Company may amend, alter or terminate this Plan at any time by resolution of the Board.

IN WITNESS WHEREOF, the Arch Coal, Inc. Outside Directors' Deferred Compensation Plan is effective as of January 1, 1999.

ARCH COAL, INC.

By: /s/ Jeffry N. Quinn

Title: Senior Vice President

EXHIBIT 10.31

SECOND AMENDMENT TO THE
ARCH MINERAL CORPORATION
SUPPLEMENTAL RETIREMENT PLAN

WHEREAS, Arch Mineral Corporation previously adopted the Arch Mineral Corporation Supplemental Retirement Plan ("Arch Mineral Plan"); and

WHEREAS, Arch Mineral Corporation reserved the right to amend the Arch Mineral Plan pursuant to Section 5.G thereof; and

WHEREAS, Arch Mineral Corporation changed its name to Arch Coal, Inc. ("Company") so that the Company is the successor to Arch Mineral Corporation; and

WHEREAS, effective January 1, 1998, the Company desires to amend the Arch Mineral Plan and change its name to the Arch Coal, Inc. Supplemental Retirement Plan ("Plan");

NOW, THEREFORE, effective January 1, 1998, the Arch Mineral Plan is amended and restated in its entirety as follows:

SECTION 1
DEFINITIONS

A. "Code" means the Internal Revenue Code of 1986, as amended.

B. "Committee" means the committee appointed pursuant to Section 4.

C. "Company" means Arch Coal, Inc., a Delaware corporation.

D. "Deferred Vested Pension" means the monthly benefit for life payable under the Pension Plan to a Participant whose employment terminates before he is eligible for an Early Retirement Pension or Normal Retirement Pension and who has a vested entitlement to benefits under the Pension Plan. Such monthly benefit shall be calculated as of the first day of the month on which the Participant would first be entitled to a monthly Deferred Vested Benefit for life under the Pension Plan.

E. "Early Retirement Pension" means the monthly benefit for life payable under the Pension Plan commencing as of the first day of the month coinciding with or next following the date he attains age fifty-five (55) but is less than age sixty-five (65), has ten years of Pension Credited Service, and ceases employment with the Employer other than by death.

F. "Eligible Spouse" means the Participant's surviving spouse (if any) to whom the Participant has been married for the full year ending on the Participant's date of death.

G. "Employee" means a person who is classified as a salaried employee by the Employer and who is a participant in the Retirement Plan.

H. "Employer" means the Company or any of its subsidiaries which adopts the Plan with the consent of the Company and of which the majority of the issued and outstanding voting stock is owned directly or indirectly by the Company.

I. "Normal Retirement Pension" means the monthly benefit for life payable to a Participant under the Pension Plan commencing as of the first day of the month coinciding with or next following the date the Participant attains age sixty-five (65).

J. "Participant" means an Employee who has satisfied the eligibility requirements of Section 2.

K. "Pension Credited Service" means a Participant's service for vesting purposes under the Pension Plan.

L. "Pension Plan" as above stated means the Arch Coal, Inc. Retirement Account Plan as in effect on December 31, 1997.

M. "Plan" means this Arch Coal, Inc. Supplemental Retirement Plan.

N. "Postponed Retirement Pension" means the monthly benefit for life payable to a Participant under the Pension Plan commencing as of the first day of the month coinciding with or next following the Participant's termination of employment after attaining age sixty-five (65).

O. "Retirement Plan" as above stated means the Arch Coal, Inc. Retirement Account Plan.

SECTION 2 ELIGIBILITY

Any individual who was a Participant in this Plan on December 31, 1997 shall continue as a Participant on January 1, 1998. On or after January 1, 1998, each Employee whose benefits under the Pension Plan or Retirement Plan are limited by operation of Code Section 415 or Code Section 401(a)(17) shall be a Participant in this Plan on the later of January 1, 1998 or the date the Employee's Pension Plan or Retirement Plan benefits are first limited by Code Section 415 or Code Section 401(a)(17).

SECTION 3 BENEFITS

Any Participant who terminated employment with the Company before January 1, 1998 or otherwise is not an Employee on January 1, 1998 shall be entitled to receive benefits in accordance with Section 3.A of the Plan. A Participant who is employed by the Company on or after January 1, 1998 shall be entitled to receive benefits in accordance with Section 3.B of the Plan.

A. BENEFITS FOR PENSION PLAN PARTICIPANTS NOT EMPLOYED ON OR AFTER JANUARY 1, 1998.

1. Benefits shall be payable under this Section 3.A of the Plan only to those Participants whose benefits under the Pension Plan (a) have been reduced on account of the limitations of Section 415 of the Code, or (b) are limited on account of the limitation on compensation under Section 401(a)(17) of the Code. The amount of benefits payable under this Section 3.A.1 shall equal the excess (if any) of:

(i) the amount which would have been payable to the Participant under the Pension Plan as a Normal Retirement Pension (or a Deferred Vested Pension, Early Retirement Pension, or Postponed Retirement Pension, if applicable), without regard to the limitations of Section 415 of the Code and without regard to the limitation on compensation under Section 401(a)(17) of the Code, over

(ii) the benefit the Participant would be entitled to receive under the Pension Plan as a Normal Retirement Pension (or a Deferred Vested Pension, Early Retirement Pension, or Postponed Retirement Pension, if applicable), taking into account the limitations under Sections 415 and 401(a) (17) of the Code.

Benefits under this Section 3.A.1. shall commence as of the first day of the month coinciding with or next following the earliest of (a) the date the Participant would first become entitled to a Deferred Vested Benefit payable in the form of a life annuity, (b) the date the Participant becomes entitled to an Early Retirement Pension, (c) the date the Participant becomes entitled to a Normal Retirement Pension, or (d) the date the Participant becomes entitled to a Postponed Retirement Pension, and shall terminate as of the first day of the month coinciding with or preceding the date of the Participant's death.

2. If the participant dies leaving an Eligible Spouse who is entitled to a benefit under the Pension Plan, and if such benefit is reduced on account of (a) the limitations of Section 415 of the Code, or (b) the limitations on compensation under Section 401(a) (17) of the Code, such spouse shall receive a monthly benefit for life under this Section 3.A.2 equal to the excess (if any) of:

(i) the monthly benefit for life which would have been payable to the spouse under the Pension Plan commencing as of the Participant's earliest retirement date under the Pension Plan, without regard to the limitations of Section 415 and without regard to the limitations on compensation under Section 401(a) (17) of the Code, over

(ii) the monthly benefit for life which is payable to the spouse under the Pension Plan commencing as of the Participant's earliest retirement date under the Pension Plan, taking into account the limitations under Sections 415 and 401(a) (17) of the Code.

Benefits under this Section 3.A.2 shall commence as of the date benefits are payable to the Eligible Spouse under the Pension Plan.

3. In lieu of the manner and form of payment provided above, the Committee may pay a benefit to the Participant (or his spouse or beneficiary) under this Plan in a lump sum distribution of equivalent actuarial value or in the same manner and form as his benefit under the Pension Plan. When converting the Participant's benefit under this Plan to a form other than a life annuity, the Committee shall apply the actuarial assumptions set forth in the Pension Plan.

B. BENEFITS FOR RETIREMENT PLAN PARTICIPANTS

1. Benefits shall be payable under this Section 3.B.1 of the Plan to those Participants who participate in the Retirement Plan and whose benefits are limited (a) on account of the limitations of Section 415 of the Code, or (b) on account of the limitation on compensation under Section 401(a)(17) of the Code. The amount of benefits payable under this Section 3.B.1 shall equal the excess (if any) of:

(i) the lump sum amount which would have been payable to the Participant under the Retirement Plan (as of the date benefits commence under this Plan) without regard to the limitations of Section 415 of the Code and without regard to the limitation on compensation under Section 401(a)(17) of the Code, over

(ii) the lump sum benefit the Participant is entitled to receive under the Retirement Plan (as of the date benefits commence under this Plan), taking into account the limitations under Sections 415 and 401(a)(17) of the Code.

Benefits under this Section 3.B.1 shall commence as of the earliest date that the Participant is eligible to begin receiving benefits under the Retirement Plan and shall be paid in a lump sum.

2. If a Participant dies before his benefits begin under this Plan and he leaves an Eligible Spouse who is entitled to a benefit under the Retirement Plan, and if such benefit (a) is reduced on account of Section 415 of the Code or (b) is reduced on account of Section 401(a)(17) of the Code, such spouse shall receive a benefit under this Section 3.B.2 equal to the excess (if any) of:

(i) the lump sum amount which would have been payable to the spouse under the Retirement Plan without regard to the limitations of Sections 415 and 401(a)(17) of the Code, over

(ii) the lump sum benefit payable to the spouse under the Retirement Plan taking into account the limitations under Sections 415 and 401(a)(17) of the Code (or any successors thereto).

Benefits under this Section 3.B.2 shall commence as of the date benefits are payable to the Eligible Spouse under the Retirement Plan and shall be paid in a lump sum.

SECTION 4 ADMINISTRATION AND CLAIMS PROCEDURE

A. The Committee for the Plan shall consist of the same individuals who have been appointed by the Boards of Directors of the Company to serve as the Pension Committee of the Retirement Plan.

B. The Committee shall construe, interpret and administer all provisions of the Plan and a decision of a majority of the members of the Committee shall govern.

C. A decision of the Committee may be made by a written document signed by a majority of the members of the Committee or by a meeting of the Committee. The Committee may authorize any one of its members to sign documents or papers on its behalf.

D. The Committee shall appoint a secretary who need not be a member of the Committee. The secretary shall keep all records of meetings and of any action by the Committee and any and all other records desired by the Committee. The Committee may appoint such agents, who need not be members of the Committee, as it may deem necessary for the effective exercise of its duties, and may, to the extent not inconsistent herewith, delegate to such agents any powers and duties, both ministerial and discretionary, as the Committee may deem expedient and appropriate.

E. No member of the Committee shall make any decision or take any action regarding his own benefits under the Plan, but all such matters shall be decided by a majority of the remaining members of the Committee or, in the event of inability to obtain a majority, by the Chairman of the Company.

F. A Participant who believes that he is being denied a benefit to which he is entitled (hereinafter referred to as "Claimant") may file a written request for such benefit with the Plan Administrator of the Retirement Plan setting forth his claim. The request must be addressed to: Plan Administrator, Arch Coal, Inc., City Place One, Suite 300, St. Louis, Missouri 63141.

G. Upon receipt of a claim, the Plan Administrator shall advise the Claimant that a reply will be forthcoming within ninety (90) days and shall in fact deliver such reply within such period. However, the Plan Administrator may extend the reply period for an additional ninety (90) days for reasonable cause. If the claim is denied in whole or in part, the Plan Administrator will adopt a written opinion using language calculated to be understood by the Claimant setting forth:

1. the specific reason or reasons for denial,
2. specific references to pertinent Plan provisions on which the denial is based,
3. a description of any additional material or information necessary for the Claimant to perfect the claim and an explanation why such material or such information is necessary,
4. appropriate information as to the steps to be taken if the Claimant wishes to submit the claim for review, and

5. the time limits for requesting a review under Subsection H and for the review under Subsection I.

H. Within sixty (60) days after the receipt by the Claimant of the written opinion described above, the Claimant may request in writing that the Committee review the determination of the Plan Administrator. Such request must be addressed to: Committee, Arch Coal, Inc., City Place One, Suite 300, St. Louis, Missouri 63141. The Claimant or his duly authorized representative may, but need not, review pertinent documents and submit issues and comments in writing for consideration by the Committee. If the Claimant does not request a review of the Plan Administrator's determination by the Committee within such sixty (60) day period, he shall be barred and estopped from challenging the Plan Administrator's determination.

I. Within sixty (60) days after the Committee's receipt of a request for review, it will review the Plan Administrator's determination. After considering all materials presented by the Claimant, the Committee will render a written opinion setting forth the specific reasons for his decision and containing specific references to the pertinent Plan provisions on which his decision is based. If special circumstances require that the sixty (60) day period be extended, the Committee will so notify the Claimant and will render the decision as soon as possible but not later than 120 days after receipt of the request for review.

SECTION 5 FORFEITURE

Subject to any divestiture limitations imposed by the then applicable law, a Participant's right to his benefits, or any surviving spouse's or Eligible Spouse's right related to such benefits, shall be divested if the Participant is found to have violated the law as to any business matter of the Employer and such violation materially affects the Employer's business or reputation. Otherwise, there shall be no divestiture of rights of any Employee who as become a Participant herein.

SECTION 6 MISCELLANEOUS

A. PLAN YEAR. The Plan shall operated on a calendar year basis.

B. SPENDTHRIFT. No Participant or beneficiary shall have the right to assign, transfer, encumber or otherwise subject to lien any of the benefits payable under this Plan.

C. INCAPACITY. If, in the opinion of the Committee, a person to whom a benefit is payable is unable to care for his affairs because of illness, accident or any other reason, any payment due the person, unless prior claim therefor shall have been made by a duly qualified guardian or other duly appointed and qualified representative of such person, may be paid to

some member of the person's family, or to some party who, in the opinion of the Committee, has incurred expense for such person. Any such payment shall be a payment for the account of such person and shall be a complete discharge of any liability therefor to such person.

D. EMPLOYEE RIGHTS. The Employer, in adopting this Plan, shall not be held to create or vest in any Employee or any other person any benefits other than the benefits specifically provided herein, or to confer upon any Employee the right to remain in the service of the Employer.

E. SERVICE OF PROCESS AND PLAN ADMINISTRATOR. The Secretary of the Company shall be the agent for service of legal process.

F. UNFUNDED PLAN. This Plan shall be unfunded. All payments to a Participant under the Plan shall be made from the general assets of the Participant's Employer. The rights of any Participant to payment shall be those of an unsecured general creditor of his Employer.

G. COMPANY RIGHTS. The Company reserves the right to amend or terminate the Plan, provided that the rights of each designated Participant shall remain unaffected.

IN WITNESS WHEREOF, the Company has caused this Amendment to be executed by its duly authorized officer this 1st day of January, 1998.

ARCH COAL, INC.

By: /s/ Jeffry N. Quinn

ATTEST: /s/ Miriam Rogers Singer

MANAGEMENT'S DISCUSSION AND ANALYSIS

Reference is made to the "Certain Trends and Uncertainties" section below in this Management's Discussion and Analysis for discussion of important factors that could cause actual results to differ from expectations and non-historical information contained herein.

RESULTS OF OPERATIONS

Ashland Coal, Inc. ("Ashland Coal") merged with Arch Mineral Corporation effective July 1, 1997 (the "Ashland Coal merger") to form the Company and the Company acquired the U.S. coal operations of Atlantic Richfield Company ("ARCO") effective June 1, 1998 (the "Arch Western transaction" and "Arch Western"). Results of operations do not include activity of Ashland Coal or ARCO's U.S. coal operations prior to the effective dates of these transactions. Accordingly, the Company's results of operations for 1998, 1997 and 1996 are not directly comparable.

1998 Compared to 1997

Net income for 1998 was \$30.0 million compared to \$30.3 for 1997. Current year results include a full year of operating results from the former Ashland Coal operations, whereas the prior year included only six months of results from those operations. In addition, the current year includes results of operations from the ARCO, now Arch Western operations from June 1, 1998, including a 65% share of Canyon Fuel Company, LLC ("Canyon Fuel") income, net of purchase accounting adjustments.

Total revenues increased 41% as a result of inclusion of a full year of results from the former Ashland Coal operations in 1998 and seven months of Arch Western operating results, including income from the Company's equity investment in Canyon Fuel. On a per-ton sold basis, however, the Company's average selling price decreased by \$7.93, primarily because of the inclusion of the Arch Western operations. Western coal has a significantly lower average sales price than that provided from the Company's Eastern coal operations, due primarily to lower Btu content of Powder River Basin coal. Selling prices were also affected by adverse market conditions in certain western United States and export markets, as well as reduced seasonal demand caused by unusually warm winter weather.

Net income approximated that for 1997 despite the Arch Western transaction and the inclusion of a full year of results from the former Ashland Coal operations. Operating results were favorably impacted in 1998 by increased production from the Company's Mingo Logan longwall operation (Mountaineer Mine), which produced \$77.8 million or 89% of the Company's income from operations for the year. This positive result was offset, in part, by production shortfalls, deterioration of mining conditions and resulting lower net income contributions from the Company's Dal-Tex and Hobet mining complexes in central Appalachia and the closure of the Company's large surface operation in Illinois as a result of reserve depletion. In particular, as a result of the continued delay in receiving a new mining permit, the Dal-Tex operation has been forced to operate in less favorable mining areas with higher overburden ratios and lower productivity, resulting in higher production costs. The Company's 1998 results were also significantly impacted by Arch Western operating difficulties. The Company experienced production shortfalls and other deficiencies at its Black Thunder Mine in Wyoming due to geologic, water drainage and sequencing problems, which are currently being addressed, and substantial transportation delays at the West Elk Mine in Colorado. In addition, Canyon Fuel experienced difficult geologic conditions at its Skyline Mine. Other items adversely affecting current year results as compared to 1997 results included the expiration of the Georgia Power contract in December 1997, reduced shipments under an above-market price long-term contract in 1998, the completion in 1997 of \$10.8 million annual accretion of a 1993 unrecognized net gain related to pneumoconiosis (black lung) liabilities, and a net increase in reclamation costs of \$4.9 million in 1998 as compared to a benefit in 1997 of \$4.4 million resulting from the Company's recosting of its reclamation liability. Operating results in 1998 include gains from the dispositions

of assets of \$41.5 million compared to \$4.8 million in 1997. The gain in 1998 includes pre-tax gains of \$18.5 million on the sale of certain idle properties in eastern Kentucky and \$7.5 million on the sale of the Company's idle Big Sandy Terminal. Prior year results were also affected by a one-time charge of \$39.1 million (\$23.8 million after-tax) related to the Ashland Coal merger.

Selling, general and administrative expenses increased \$15.9 million primarily due to the effects of the Ashland Coal merger and the Arch Western transaction.

As a result of the amortization of the carrying value of the sales contracts acquired in the Ashland Coal merger and the Arch Western transaction, amortization of coal supply agreements increased \$16.5 million.

Interest expense increased \$44.4 million due to the increase in debt as a result of the Arch Western transaction.

The Company's effective tax rate is sensitive to changes in annual profitability and percentage depletion.

During 1998, the Company incurred an extraordinary charge of \$1.5 million (net of a tax benefit of \$.9 million) related to the early extinguishment of debt in conjunction with the refinancing of Company debt resulting from the Arch Western transaction.

EBITDA (income from operations before the effects of changes in accounting principles and extraordinary items, merger-related costs and unusual items, net interest expense, income taxes, depreciation, depletion and amortization, for Arch Coal, its subsidiaries and its ownership percentage in its equity investments) was \$313.5 million for 1998 compared to \$224.6 million for 1997. The increase in EBITDA is primarily attributable to the additional sales that resulted from the Ashland Coal merger and the Arch Western transaction. EBITDA is a widely accepted financial indicator of a company's ability to incur and service debt, but EBITDA should not be considered in isolation or as an alternative to net income, operating income, or cash flows from operations, or as a measure of a company's profitability, liquidity or performance under generally accepted accounting principles. The Company's method of computing EBITDA also may not be the same method used to compute similar measures reported by other companies, or EBITDA may be computed differently by the Company in different contexts (e.g., public reporting versus computations under financing agreements).

1997 Compared to 1996

Net income for 1997 was \$30.3 million compared to net income of \$33.0 million for 1996. The 1997 year includes a one-time charge of \$39.1 million (\$23.8 million after-tax) related to the Ashland Coal merger. Excluding this charge, the Company had net income of \$54.1 million for the year. The merger-related charge was comprised of termination benefits and relocation costs of \$8.1 million and costs of \$31.0 million associated with the idling of duplicate facilities.

Gross profit on coal sales (selling price less cost of sales) on a per-ton basis increased \$.11 per ton from 1996 to 1997. The average selling price increased \$.05 per ton while cost of coal sold decreased \$.06 per ton. The reduction in cost was primarily attributable to higher production from the Ruffner and Wylo mines, cost improvements at Lone Mountain's Huff Creek and Darby Fork mines, and the addition, as a result of the merger, of low-cost production from the Mingo Logan and Dal-Tex complexes. Largely offsetting those effects were higher costs resulting from the depletion of the longwall reserves at Mine No. 37, higher costs at the Company's Wyoming and Pardee operations, and the addition of higher-cost surface production from the Hobet 21 Complex after the Ashland Coal merger.

Selling, general and administrative expenses increased \$8.4 million primarily due to the effects of the Ashland Coal merger.

Primarily due to the amortization of the carrying value of the Ashland Coal sales contracts, amortization of coal supply agreements increased \$5.5 million. This increase was partially offset by a decrease in amortization resulting from the completion of amortization on certain other sales contracts at the end of 1996.

Interest expense declined \$1.0 million in 1997 as a result of lower average debt levels and the prepayment of higher-cost fixed-rate debt.

The income tax benefit recorded in 1997 was primarily attributed to the \$15.3 million tax benefit associated with the one-time merger-related charge discussed above. The Company's effective tax rate is sensitive to annual profitability and percentage depletion.

EBITDA was \$224.6 million for 1997 compared to \$170.8 million for 1996. The increase in EBITDA is primarily attributable to the Ashland Coal merger.

OUTLOOK

Arch Coal's strategic position was strengthened in 1998 with the Arch Western transaction and the Company's successful October 1, 1998, \$158 million bid on the 3,546 acre Thundercloud tract in the Powder River Basin of Wyoming. The reserves acquired met Phase II requirements of the Clean Air Act and the Thundercloud tract also has favorable geologic conditions, contains demonstrated coal reserves of approximately 412 million tons of coal and is contiguous with the Company's Black Thunder mine. The Company plans to add a fourth dragline at the Black Thunder mine and intends to begin mining the Thundercloud tract once necessary permits are obtained which it expects to secure in late 2000. The Arch Western transaction will help solidify the Company's future as other operations' reserves deplete, most notably Mingo Logan's Mountaineer Mine estimated to deplete in 2002. The Mountaineer Mine generated \$77.8 million, or 89% of the Company's total operating income in 1998.

With respect to other operations, management has determined to continue a lower level of coal mining operations at the Seminoe II and Medicine Bow mines in Wyoming as a result of oversupply of competing coals in this market. The scheduled and previously disclosed closures of the Hobet 07 Complex in West Virginia and the Arch of Illinois surface mine due to the depletion of their economical dedicated reserves and the closure of Mine No. 37 in Kentucky, all in 1998, have reduced production capacity in the Eastern United States. In addition, the Wylo surface operation in West Virginia will deplete its economical reserves in mid-1999. Results for 1998 were adversely affected by continuing production shortfalls at the Hobet 21 Complex and the Lone Mountain Complex. At the end of 1998, several changes were made at these operations, including new management. However, there is no certainty that these operations will improve production in 1999. Production losses as a result of such reduced mining plans, mine closures and operational shortfalls have been offset to some degree by production from Mingo Logan's new surface mine in the Phoenix reserves, which commenced production in the second quarter of 1998. Additional production capacity was added in the fourth quarter of 1998 at the Phoenix reserve. The Company expects the poor rail service experienced at its Western operations in 1998 to improve, although such service may continue to hinder performance in 1999.

At the Company's Dal-Tex Mine in Logan County, West Virginia, the permitting of a new portion of the mine has been delayed by legal challenges initiated by environmental activists in a suit against the West Virginia Department of Environmental Protection ("DEP"), the U.S. Environmental Protection Agency ("EPA") and the U.S. Army Corps of Engineers (the "Corps"). Potential layoffs and curtailment of operations at that complex could occur and major changes in mine plans will be necessary if the mining operation does not receive the necessary permits to continue mining. The required permits consist of a surface mining permit issued by the DEP, an NPDES Permit approved by the EPA, and a "dredge and fill" permit under Section 404 of the Clean Water Act issued by the Corps. On November 4, 1998 the DEP issued the required surface mining permit. The EPA had approved the NPDES Permit and the Corps had indicated it was prepared to issue the dredge and fill permit. However, on February 3, 1999 the United States District Court for the Southern District of West Virginia issued a temporary restraining order enjoining the

Corps from issuing the permit. That temporary restraining order was subsequently extended until March 5, 1999. For additional discussion of these matters, see the "Legal Contingencies" subsection of the Contingencies section below.

LIQUIDITY AND CAPITAL RESOURCES

At December 31, 1998, the Company's debt represented 69% of capital employed compared to 31% at the prior year end and its current assets to current liabilities ratio was 1.1 to 1.0 at December 31, 1998, compared to 1.2 to 1.0 at the end of the prior year. Debt as a percent of capital employed has increased as a result of the financing that occurred in conjunction with the Arch Western transaction. The following is a summary of cash provided by or used in each of the indicated types of activities during the past three years:

(in thousands)	1998	1997	1996

Cash provided by (used in):			
Operating activities	\$ 188,023	\$ 190,263	\$ 138,471
Investing activities	(1,271,371)	(80,009)	(72,638)
Financing activities	1,101,585	(114,793)	(69,619)

The 1998 slight decrease in cash provided by operating activities from the 1997 level was principally due to increased interest expense as a result of increased borrowings associated with the Arch Western transaction, and tax payments related to prior years' IRS audits. This was mostly offset by increased operating activity resulting from the Arch Western transaction and distributions from the Company's investment in Canyon Fuel. The 1997 increase in cash provided by operating activities from the 1996 level was principally due to the Ashland Coal merger, partially offset by tax payments related to prior years' IRS audits.

The increase in cash used for investing activities in 1998 from the 1997 level primarily resulted from the payment of \$1.1 billion in the Arch Western transaction. In addition, the Company's expenditures for property, plant and equipment were \$141.7 million, \$77.3 million and \$62.5 million in 1998, 1997 and 1996, respectively. Expenditures for 1998 included a \$16.0 million royalty payment on a lease acquired in 1992 by Ashland Coal and a federal lease bonus payment of \$31.6 million on the Wyoming coal reserve known as the Thundercloud tract. Also included in 1998 expenditures were equipment upgrades at the Conant Mine, the Hobet 21 Mine/Beth Station Preparation Plant, the Ruffner Mine, the Lone Mountain Complex and the Mingo Logan longwall mine, which accounted for \$3.2 million, \$4.5 million, \$5.9 million, \$9.8 million and \$10.3 million, respectively, and equipment purchases to start up the new Phoenix surface mine which totaled \$14.9 million. The Company also agreed in 1998 to repurchase a sublease for an overlying seam in certain areas of the Mingo Logan longwall operation for \$13.6 million. The expenditures for 1997 included the acquisition of reserves adjacent to the Samples Mine and reserves adjacent to the Hobet 21 Complex for \$17.0 million and \$6.0 million, respectively. Also included in 1997 expenditures was \$6.5 million to complete the upgrade and extension of the Hobet 21 conveyor system, \$8.6 million for improvements at Lone Mountain's Huff Creek and Darby Fork mines and \$4.1 million to add a second section to Pardee's Band Mill Mine. 1996 expenditures included \$15.1 million related to the final phase of development of Lone Mountain's operations, \$5.9 million for the development of the Band Mill Mine, \$14.2 million for Carbon Basin reserves and \$4.8 million for construction of the Archveyor system for the Conant Mine. The Company estimates that its expenditures for replacement and improvement of existing mining equipment, expansion of existing mines and development of new mines (excluding acquisitions) may be as much as \$180 million during 1999.

Cash provided by financing activities in 1998 reflects an increase in borrowings of \$1.1 billion associated with the Arch Western transaction, net of associated debt repayment. The Company repaid approximately \$35.7 million of senior notes concurrently with its borrowings to finance the Arch Western transaction. In addition, the

January 1998 sale and leaseback of equipment resulted in proceeds of \$45.4 million. Cash used in financing activities in 1997 and 1996 principally reflects reductions in borrowings of \$102.2 million and \$61.6 million, respectively. The increase in debt repayments during 1997 versus 1996 primarily resulted from the higher amount of cash flow generated by the Ashland Coal merger in the second half of 1997.

In connection with the Arch Western transaction, the Company entered into two new five-year credit facilities: a \$675 million non-amortizing term loan to Arch Western ("Arch Western credit facility") and a \$900 million credit facility to the Company ("Arch Coal credit facility"), including a \$300 million fully amortizing term loan and a \$600 million revolving credit facility. Borrowings under the new Arch Coal credit facility were used to finance the acquisition of ARCO's Colorado and Utah coal operations, to pay related fees and expenses, to refinance existing corporate debt and for general corporate purposes. Borrowings under the Arch Western credit facility were used to fund a portion of a \$700 million cash distribution by Arch Western to ARCO, which distribution occurred simultaneously with ARCO's contribution of its Wyoming coal operations and certain other assets to Arch Western. The Arch Western credit facility is not guaranteed by the Company. The rate of interest on the borrowings under the agreements is, at the Company's option, the PNC Bank base rate or a rate based on LIBOR.

The Company periodically establishes uncommitted lines of credit with banks. These agreements generally provide for short-term borrowings at market rates. At December 31, 1998, there is \$45 million of such agreements in effect of which \$12.9 million were outstanding.

The Company is exposed to market risk associated with interest rates. At December 31, 1998, debt included \$1.363 billion of floating-rate debt which is, at the Company's option, the PNC Bank base rate or a rate based on LIBOR and current market rates for bank lines of credit. To manage these exposures, the Company enters into interest-rate swap agreements to modify the interest characteristics of outstanding Company debt. At December 31, 1998, the Company has interest-rate swap agreements having a total notional value of \$815.0 million. These swap agreements are used to convert variable-rate debt to fixed-rate debt. Under these swap agreements, the Company pays a weighted average fixed rate of 5.54% (before the credit spread over LIBOR) and is receiving a weighted average variable rate based upon 30-day and 90-day LIBOR. The remaining terms of the swap agreements at December 31, 1998 ranged from 44 to 68 months. All instruments are entered into for other than trading purposes.

This discussion presents the sensitivity of the market value of the Company's financial instruments to selected changes in market rates and prices. The range of changes chosen reflects the Company's view of changes which are reasonably possible over a one-year period. Market values are the present value of projected future cash flows based on the market rates and prices chosen. The major accounting policies for these instruments are described in Note 1 to the consolidated financial statements.

Changes in interest rates have different impacts on the fixed- and variable-rate portions of the Company's debt portfolio. A change in interest rates on the fixed portion of the debt portfolio impacts the net financial instrument position but has no impact on interest incurred or cash flows. A change in interest rates on the variable portion of the debt portfolio impacts the interest incurred and cash flows but does not impact the net financial instrument position.

The sensitivity analysis related to the fixed portion of the Company's debt portfolio assumes an instantaneous 100-basis-point move in interest rates from their levels at December 31, 1998 with all other variables held constant. A 100-basis-point decrease in market interest rates would result in an increase in the net financial instrument position of the fixed portion of debt of \$33.4 million at December 31, 1998. Based on the variable-rate debt included in the Company's debt portfolio as of December 31, 1998,

after considering the effect of the swap agreements, a 100-basis-point increase in interest rates would result in an annualized additional \$5.6 million interest expense incurred based on year-end debt levels.

CONTINGENCIES

Reclamation

The Federal Surface Mining Control and Reclamation Act of 1977 and similar state statutes require that mine property be restored in accordance with specified standards and an approved reclamation plan. The Company accrues for the costs of final mine closure reclamation over the estimated useful mining life of the property. These costs relate to reclaiming the pit and support acreage at surface mines and sealing portals at deep mines. Other costs of final mine closure common to both types of mining are related to reclaiming refuse and slurry ponds. The Company also accrues for significant reclamation that is completed during the mining process prior to final mine closure. The establishment of the final mine closure reclamation liability and the other ongoing reclamation liability is based upon permit requirements and requires various estimates and assumptions, principally associated with costs and productivities.

The Company reviews its entire environmental liability periodically and makes necessary adjustments, including permit changes and revisions to costs and productivities to reflect current experience. These recosting adjustments are recorded to cost of coal sales. Adjustments to increase the liability were \$4.9 million in 1998 and adjustments to decrease the liability were \$4.4 million and \$4.5 million in 1997 and 1996, respectively. The Company's management believes it is making adequate provisions for all expected reclamation and other associated costs.

Reclamation and mine closing costs for operations as of December 31, 1998, in the aggregate, are estimated to be approximately \$292.0 million. At December 31, 1998 and December 31, 1997, the accrual for such costs, which is included in accrued reclamation and mine closure and in accrued expenses, was \$157.5 million and \$125.6 million, respectively.

Legal Contingencies

The Company is a party to numerous claims and lawsuits with respect to various matters, including those discussed below. The Company provides for costs related to contingencies, including environmental matters, when a loss is probable and the amount is reasonably determinable. The Company estimates that at December 31, 1998, its probable aggregate loss as a result of such claims is \$3.8 million (included in other noncurrent liabilities) and believes that probable insurance recoveries of \$.9 million (included in other assets) related to these claims will be realized. The Company estimates that its reasonably possible aggregate losses from all currently pending litigation could be as much as \$.4 million (before taxes) in excess of the probable loss previously recognized. After conferring with counsel, it is the opinion of management that the ultimate resolution of these claims, to the extent not previously provided for, will not have a material adverse effect on the consolidated financial condition, results of operations or liquidity of the Company.

A customer of the Company informed the Company that one of its power plants to which the Company supplies coal will no longer provide baseload capacity to a public utility which purchases the electricity produced from the plant and instead will be used to provide peak demand only. As a result, the customer maintains the plant will require substantially less coal under the customer's existing above-market contract with the Company. The Company has filed a civil action in Federal District Court in the Southern District of West Virginia alleging breach of contract and other causes of action against the customer in respect of the customer's failure to comply with the terms of this contract. On July 17, 1998, the court granted the customer's motion to stay the lawsuit pending arbitration. As of December 31, 1998, the

carrying amount of acquisition costs allocated to this coal supply contract amounts to approximately \$13.7 million. The Company currently expects that it will recover the carrying amount of this asset, however, the ultimate outcome of this matter is uncertain.

Canyon Fuel is in litigation with the Skyline Partners, the lessors of the coal reserves which comprise Canyon Fuel's Skyline Mine. The coal leases in question were entered into between The Coastal Coal Corporation, Canyon Fuel's predecessor in interest, and the Skyline Partners' predecessor. The coal leases require the lessee, Canyon Fuel, to pay an annual advance minimum royalty of \$5 million, which is fully recoupable against a production royalty that is to be paid by Canyon Fuel on each ton of coal mined and sold from the leaseholds. In 1997, Canyon Fuel concluded that a number of recoverable tons which remain on the leasehold were insufficient to allow it to fully recoup the total amount of advance royalties that have been paid to the Skyline Partners, and filed suit in Utah State Court against the Skyline Partners alleging that Canyon Fuel is not required to make the final minimum advance royalty payment of \$5 million and seeking to recover \$2.1 million in advance minimum royalties paid to the Skyline Partners that Canyon Fuel will not be able to recoup based upon the estimated number of recoverable tons under the leases. In November 1997, the Skyline Partners filed a companion case in federal district court in Colorado, seeking to compel Canyon Fuel to pay the last \$5 million advance minimum royalty payment, and alleging a default under the leases. To date, these cases have principally involved procedural disputes concerning proper venue for the case.

On October 24, 1996, the rock strata overlaying an abandoned underground mine adjacent to the coal-refuse impoundment used by the Lone Mountain preparation plant failed, resulting in an accidental discharge of approximately 6.3 million gallons of water and fine coal slurry into a tributary of the Powell River in Lee County, Virginia. At the request of the EPA and the U.S. Fish and Wildlife Service, the United States Attorney for the Western District of Virginia opened a criminal investigation of the 1996 incident. The Company has cooperated with the U.S. Attorney throughout the investigation which is still pending.

On October 31, 1997, the EPA notified a Company subsidiary that it was a potentially responsible party in the investigation and remediation of two hazardous waste sites located in Kansas City, Kansas, and Kansas City, Missouri. The Company's involvement arises from the subsidiary's sale, in the mid-1980's, of fluids containing small quantities of polychlorinated biphenyls ("PCBs") to a company authorized to engage in the processing and disposal of these wastes. Some of these waste materials were sent to one of the sites for final disposal. The Company responded to the information request submitted by EPA on December 1, 1997. Any liability which might be asserted by EPA against the Company is not believed to be material because of the de minimis quantity and concentration of PCBs linked to the Company. Moreover, the party with whom the subsidiary contracted to dispose of the waste material has agreed to indemnify the Company for any costs associated with this action.

On July 16, 1998, 10 individuals and The West Virginia Highlands Conservancy filed suit in U.S. District Court for the Southern District of West Virginia alleging violations of SMCRA and the Clean Water Act. Named as defendants in the suit are the director of the West Virginia Division of Environmental Protection ("DEP") and officials of the U.S. Army Corps of Engineers (the "Corps").

In their complaint, the plaintiffs allege that the DEP has violated its duties under SMCRA and the Clean Water Act by approving surface mining permits that authorize the construction of "valley fills." These are the large, engineered works into which the excess earth and rock extracted above and between the seams of coal that are removed during surface mining is placed. The approval of such permits are alleged to "result in unpermitted discharges of pollutants into state waters, violations of state water quality standards, disturbance to the 100-foot buffer zone around streams, [and] destruction to riparian

vegetation." The complaint also alleges that the DEP has failed to require that lands mined be restored to Approximate Original Contour ("AOC") and that approved post-mining land uses are enforced following reclamation.

Four indirect, wholly-owned subsidiaries of the Company currently hold nine permits that were identified in the complaint as violating the legal standards that the plaintiffs have requested the district court to interpret. In addition, a pending permit application for the Company's Dal-Tex operation (known as the "Spruce Fork Permit") is specifically identified as a permit whose issuance should be enjoined. Three subsidiaries of the Company intervened in the lawsuit in support of the Corps and the DEP on August 6, 1998. The Company and the other defendants have vigorously opposed claims asserted in the lawsuit.

A settlement was entered between the plaintiffs and the Corps on December 23, 1998. Under that agreement, the plaintiffs agreed to dismiss all claims against the Corps in return for the Corps agreeing, in conjunction with other federal agencies, to conduct a comprehensive environmental impact statement of the long-term effects of valley fills. During the twenty-four (24) months anticipated to complete the study, the agreement imposes new, interim standards that will be used in reviewing and approving permits. The most significant change imposed under the settlement agreement is the obligation of a permit applicant to seek an individual ss.404 Clean Water Act permit if it proposes to construct a valley fill affecting a drainage area larger than 250 acres.

The Company's Dal-Tex operation's Spruce Fork Permit was specifically excluded from the terms of the settlement. Nevertheless, the EPA withdrew its final objections to a Clean Water Act ss.402 NPDES permit that had been pending since mid-1998. The Company was notified by the Corps on January 21, 1999 that it would issue its Clean Water Act ss.404 permit within five (5) days which was the last permit, approval, or authorization needed to commence mining on the Spruce Fork Permit. On January 26, 1999, the plaintiffs moved for a temporary restraining order. On February 3, 1999, the U.S. District Court for the Southern District of West Virginia entered the restraining order, which was subsequently extended until March 5, 1999. Simultaneously, the court commenced a hearing on the preliminary injunction which was concluded on February 26, 1999. The Company expects a ruling on the preliminary injunction prior to the expiration of the temporary restraining order. Should the court enter the preliminary injunction, or otherwise delay substantially the issuance of the permit, the decision will have a material adverse effect on the Dal-Tex operation.

CERTAIN TRENDS AND UNCERTAINTIES

Substantial Leverage; Variable Interest Rates; Restrictive Covenants

The Company has substantial leverage and significant debt service and lease and royalty payment obligations. As of December 31, 1998, the Company had outstanding consolidated indebtedness of approximately \$1.4 billion, representing approximately 69% of the Company's total capitalization.

The Company's ability to satisfy its debt service and lease and royalty payment obligations will depend upon the future operating performance of its subsidiaries, which will be affected by prevailing economic conditions in the markets they serve and financial, business and other factors, certain of which are beyond their control. Based upon current levels of operations, the Company believes that cash flow from operations and available cash, together with available borrowings under the Company's credit facilities, will be adequate to meet the Company's future liquidity needs for at least the next several years. However, there can be no assurance that the Company's business will generate sufficient cash flow from operations or that future borrowings will be available in an amount sufficient to enable the Company to fund its debt service and lease and royalty payment obligations or its other liquidity needs.

The degree to which the Company is leveraged could have material consequences to the Company and its business, including, but not limited to: (i) making it more difficult for the Company to satisfy its debt service, lease and royalty payment and other obligations; (ii) increasing the Company's vulnerability to general adverse economic and

industry conditions; (iii) limiting the Company's ability to obtain additional financing to fund future acquisitions, working capital, capital expenditures or other general corporate requirements; (iv) reducing the availability of cash flow from operations to fund acquisitions, working capital, capital expenditures or other general corporate purposes; (v) limiting the Company's flexibility in planning for, or reacting to, changes in its business and the industry in which it competes and (vi) placing the Company at a competitive disadvantage vis-a-vis less leveraged competitors.

A significant portion of the Company's indebtedness bears interest at variable rates that are linked to short-term interest rates. If interest rates rise, the Company's costs relative to those obligations would also rise.

Terms of the Company's credit facilities and leases contain financial and other restrictive covenants that limit the ability of the Company to, among other things, pay dividends, effect acquisitions or dispositions and borrow additional funds, and require the Company to, among other things, maintain various financial ratios and comply with various other financial covenants. Failure by the Company to comply with such covenants could result in an event of default which, if not cured or waived, would have a material adverse effect on the Company.

Environmental and Regulatory Factors

Governmental authorities regulate the coal mining industry on matters as diverse as employee health and safety, air quality standards, water pollution, groundwater quality and availability, plant and wildlife protection, the reclamation and restoration of mining properties, the discharge of materials into the environment and surface subsidence from underground mining. In addition, federal legislation mandates certain benefits for various retired coal miners represented by the United Mine Workers of America ("UMWA"). These regulations and legislation have had and will continue to have a significant effect on the Company's costs of production and competitive position.

Permits are required to be obtained by mining companies that strictly regulate various environmental and health and safety matters in connection with coal mining by the permittee. Numerous permits are required for mining operations. Other than as described in "Legal Contingencies", the Company believes all permits required to conduct present mining operations have been obtained and that, upon the filing of the required information with the appropriate regulatory agencies, all permits necessary for continuing operations will be obtained. However, as described in "Legal Contingencies", the regulatory environment in West Virginia is changing with respect to current or future large scale surface mines. The regulatory authorities have considerable discretion in the timing of permit issuance. Because both private individuals and the public at large possess rights to comment on and otherwise engage in the permitting process, including through intervention in the courts, no assurance can be made that all permits will be issued, or if issued, that such issuance would be timely, or that permitting requirements will not be changed or interpreted in a manner adversely affecting the Company.

The federal Clean Water Act ("CWA") affects coal mining operations in two principal ways. First, the Army Corps of Engineers (the "Corps") issues permits under Section 404 of the CWA whenever a mine operator proposes to build a fill or impoundment in waters of the United States. In addition, the Environmental Protection Agency (the "EPA") must approve the issuance by a state agency of an NPDES (National Pollutant Discharge Elimination System) permit under Section 402 of the CWA. These permits encompass storm water discharges from a mine facility. Regular monitoring and compliance with reporting requirements and performance standards are preconditions for the issuance and renewal of NPDES permits governing the discharge of pollutants into waters. All states in which the Company's subsidiaries operate also have laws restricting discharge of pollutants into the waters of those states.

New legislation, regulations or orders may be adopted or become effective which may adversely affect the Company's mining operations or cost structure, or the ability of the Company's customers to use coal. New legislation,

regulations or orders may also require the Company or its customers to incur increased costs or to change operations significantly. These factors could have a material adverse effect on the Company's business, results of operations and financial condition.

The federal Clean Air Act requires utilities that currently are major sources of nitrous oxide in moderate or higher ozone non-attainment areas to install reasonably available control technology ("RACT") for nitrous oxide. In addition, stricter ozone standards are expected to be implemented by the EPA by 2003. The Ozone Transport Assessment Group ("OTAG") was formed to make recommendations to the EPA for addressing ozone problems in the eastern United States. Based on OTAG's recommendations, the EPA announced a proposal that would require 22 Eastern states, including states in which many of the Company's customers are located, to make substantial reductions in nitrous oxide emissions. The EPA expects that states will achieve these reductions by requiring power plants to reduce their nitrous oxide emissions by an average of 85%. Installation of RACT and additional control measures required under the proposal will make it more costly to operate coal-fired utility power plants and, depending on the requirements of individual state attainment plans and the development of revised new source performance standards, could make coal a less attractive fuel alternative in the planning and building of utility power plants in the future. Any reduction in coal's share of the capacity for power generation could have a material adverse effect on the Company's financial condition and results of operations. The effect of such legislation or regulation, or other legislation that may be enacted in the future, on the coal industry in general and on the Company in particular cannot be predicted with certainty. Although a large portion of the Company's coal reserves are comprised of compliance and low-sulfur coal, there can be no assurance that the implementation of the Clean Air Act or any future regulatory provisions will not materially adversely affect the Company.

On December 11, 1997, United States representatives at the climate change negotiations in Kyoto, Japan, agreed to reduce the emissions of greenhouse gases (including carbon dioxide and other gas emissions that are believed by some scientists to be trapping heat in the atmosphere and warming the earth's climate) in the United States. The adoption of the requirements of the Kyoto Protocol by the United States is subject to conditions which may not occur, and are also subject to the Protocol's ratification by the United States Senate. The United States Senate has indicated that it will not ratify an agreement unless certain conditions, not currently provided for in the Kyoto Protocol, are met. At present, it is not possible to predict whether the Kyoto Protocol will attain the force of law in the United States or what its impact would be on the Company. Further developments in connection with the Kyoto Protocol could adversely affect the Company's financial condition and results of operations.

Reserve Degradation and Depletion

The Company's profitability depends substantially on its ability to mine coal reserves that have the geologic characteristics that enable them to be mined at competitive costs. There can be no assurance that replacement reserves, particularly in central Appalachia, will be available when required or, if available, that such replacement reserves can be mined at costs comparable to those characteristic of the depleting mines. Exhaustion of reserves at particular mines can also have an adverse effect on operating results that is disproportionate to the percentage of overall production and operating income represented by such mines. Mingo Logan's Mountaineer Mine is estimated to exhaust its longwall mineable reserves in 2002. The Mountaineer Mine generated \$77.8 million or 89% of the Company's total operating income in 1998.

Reliance on and Terms of Long-Term Coal Supply Contracts

The Company sells a substantial portion of its coal production pursuant to long-term coal supply agreements,

and as a consequence may experience fluctuations in operating results in the future as a result of expiration or termination of, or sales price redeterminations or suspensions of deliveries under, such coal supply agreements. Other short- and long-term contracts define base or optional tonnage requirements by reference to the customer's requirements, which are subject to change as a result of factors beyond the Company's (and in certain instances the customer's) control, including utility deregulation. In addition, certain price adjustment provisions permit a periodic increase or decrease in the contract price to reflect changes in specified price indices or items such as taxes or royalties. Price reopener provisions provide for an upward or downward adjustment in the contract price based on market factors. The Company has from time to time renegotiated contracts after execution to extend the contract term or to accommodate changing market conditions. The contracts also typically include stringent minimum and maximum coal quality specifications and penalty or termination provisions for failure to meet such specifications and force majeure provisions allowing suspension of performance or termination by the parties during the duration of certain events beyond the control of the affected party. Contracts occasionally include provisions that permit a utility to terminate the contract if changes in the law make it illegal or uneconomic for the utility to consume the Company's coal or if the utility has unexpected difficulties in utilizing the Company's coal. Imposition of new nitrous oxide emissions limits in connection with Phase II of the Clean Air Act in 2000 could result in price adjustments, or in affected utilities seeking to terminate or modify long-term contracts in reliance on such termination provisions. If the parties to any long-term contracts with the Company were to modify, suspend or terminate those contracts, the Company could be adversely affected to the extent that it is unable to find alternative customers at a similar or higher level of profitability.

From time to time, disputes with customers may arise under long-term contracts relating to, among other things, coal quality, pricing and quantity. The Company may thus become involved in arbitration and legal proceedings regarding its long-term contracts. There can be no assurance that the Company will be able to resolve such disputes in a satisfactory manner.

Although the Company cannot predict changes in its costs of production and coal prices with certainty, the Company believes that in the current economic environment of low to moderate inflation, the price adjustment provisions in its older long-term contracts will largely offset changes in the costs of providing coal under those contracts, except for those costs related to changes in productivity. However, the increasingly short terms of sales contracts and the consequent absence of price adjustment provisions in such contracts also make it more likely that inflation related increases in mining costs during the contract term will not be recovered by the Company through a later price adjustment.

Potential Fluctuations in Operating Results; Seasonality

The Company may experience significant fluctuations in operating results in the future, both on an annual and quarterly basis, as a result of one or more factors beyond its control, including expiration or termination of, or sales price redeterminations or suspensions of deliveries under, coal supply agreements; disruption of transportation services; changes in mine operating conditions; changes in laws or regulations, including permitting requirements; unexpected results in litigation; work stoppages or other labor difficulties; competitive and overall coal market conditions; and general economic conditions.

The Company's mining operations also are subject to factors beyond its control that can negatively or positively affect the level of production and thus the cost of mining at particular mines for varying lengths of time. These factors include weather conditions, equipment replacement and repair requirements; variations in coal seam thickness, amount of overburden, rock and other natural materials; and other surface or subsurface conditions. Such production factors frequently result in significant fluctuations in operating results.

Third quarter results of operations are frequently adversely affected by lower production and resultant higher costs due to scheduled vacation periods at the majority of the Company's mines. In addition, costs are typically somewhat higher during vacation periods because of maintenance activity carried on during those periods. These adverse effects may make the third quarter not comparable to the other quarters and not indicative of results to be expected for the full year.

Certain Contractual Arrangements

Arch Western owns the coal reserves and operating assets acquired in the Arch Western transaction. The Limited Liability Company Agreement pursuant to which Arch Western was formed provides that a subsidiary of the Company, as the managing member of Arch Western, has generally exclusive power and authority to conduct, manage and control the business of Arch Western. However, if Arch Western at the time has a debt rating less favorable than Ba3 from Moody's Investors Service or BB- from Standard & Poors Ratings Group or does not meet certain specified indebtedness and interest coverage ratios, then a proposal that Arch Western make certain distributions, incur certain capital expenditures, incur indebtedness, sell properties or merge or consolidate with any other person would require the consent of all the members of Arch Western.

In connection with the Arch Western transaction, the Company entered into a Tax Sharing Agreement pursuant to which the Company agreed to indemnify the other member of Arch Western against certain tax liabilities in the event that such liabilities arise as a result of certain actions taken prior to June 1, 2013, including the sale or other disposition of certain properties of Arch Western, the repurchase of certain equity interests in Arch Western by Arch Western or the reduction under certain circumstances of indebtedness incurred by Arch Western in connection with the Arch Western transaction. Depending on the time at which any such indemnification obligation were to arise, it could have a material adverse effect on the business, results of operations and financial condition of the Company.

The membership interests in Canyon Fuel are owned 65% by Arch Western and 35% by a subsidiary of ITOCHU Corporation, a Japanese corporation. The Third Amended and Restated Limited Liability Company Agreement (the "Canyon Fuel Agreement"), which governs the management and operations of Canyon Fuel, provides for a Management Board to manage its business and affairs. Generally, the Management Board acts by affirmative vote of the representatives of the members holding more than 50% of the membership interests. However, certain actions require either the unanimous approval of the members or the approval of representatives of members holding more than 70% of the membership interests. The Canyon Fuel Agreement also contains various restrictions on the transfer of membership interests in Canyon Fuel.

Pursuant to a Stockholders Agreement (the "Stockholders Agreement") among the Company, Ashland and Carboex S.A. (Carboex), the Company has agreed to nominate for election as a director of the Company a person designated by Carboex, and Ashland has agreed to vote its shares of common stock in a manner sufficient to cause the election of such nominee, in each case for so long (subject to earlier termination in certain circumstances) as shares of common stock owned by Carboex represent at least 63% of the shares of common stock acquired by Carboex in the Ashland Coal merger. In addition, the Company, for so long as the various trusts for the benefit of descendants of H.L. and Lyda Hunt and various corporations owned by trusts for the benefit of descendants of H.L. and Lyda Hunt (collectively the "Hunt Entities") have the collective voting power to elect by cumulative voting one or more persons to serve on the Board of Directors of the Company, has agreed to nominate for election as directors of the Company that number of persons designated by certain of the Hunt Entities that could be elected to the Board by the Hunt Entities by exercise of such cumulative voting power.

The Company's Restated Certificate of Incorporation requires the affirmative vote of the holders of at least two-thirds

of outstanding Common Stock voting thereon to approve a merger or consolidation and certain other fundamental actions involving or affecting control of the Company. The Bylaws of the Company require the affirmative vote of at least two-thirds of the members of the Board of Directors of the Company in order to declare dividends and to authorize certain other actions.

Transportation

The coal industry depends on rail, trucking and barge transportation to deliver shipments of coal to customers. Disruption of these transportation services could temporarily impair the Company's ability to supply coal to its customers and thus adversely affect the Company's business and operating results. In addition, transportation costs are a significant component of the total cost of supplying coal to customers and can affect significantly a coal producer's competitive position and profitability. Increases in the Company's transportation costs, or changes in such costs relative to transportation costs incurred by providers of competing coal or of other fuels, could have an adverse effect on the Company's business and results of operations.

Importance of Acquisitions and Related Risks

The Company has grown, in part, through the acquisition of coal companies, coal properties, coal leases and related assets, and management believes that such acquisitions will continue to be important to the Company. Acquisitions involve a number of special risks, including possible adverse effects on the Company's operating results, diversion of management's attention, failure to retain key acquired personnel, risks associated with unanticipated events or liabilities and difficulties in the assimilation of the operations of the acquired companies, some or all of which could have a material adverse effect on the Company's business, results of operations and financial condition. There can be no assurance that the Company will be successful in the development of such acquisitions or that acquired operations will achieve anticipated benefits to the Company.

Reliance on Estimates of Reserves; Title

There are numerous uncertainties inherent in estimating quantities of recoverable reserves, including many factors beyond the control of the Company. Estimates of economically recoverable coal reserves and net cash flows necessarily depend upon the number of variable factors and assumptions, such as geological and mining conditions (which may not be fully identified by available exploration data and/or differ from experience in current operations), historical production from the area compared with production from other producing areas, the assumed effects of regulation by governmental agencies and assumptions concerning coal prices, operating costs, severance and excise taxes, development costs and reclamation costs, all of which may in fact vary considerably from actual results. For these reasons, estimates of the economically recoverable quantities attributable to any particular group of properties, classifications of such reserves based on risk of recovery and estimates of net cash flows expected therefrom prepared by different engineers or by the same engineers at different times may vary substantially. Actual coal tonnage recovered from identified reserve areas or properties and revenues and expenditures with respect to the Company's reserves may vary from estimates, and such variances may be material. No assurance can be given that these estimates are an accurate reflection of the Company's actual reserves.

The Company's mining operations are conducted on properties owned or leased by the Company. The loss of any lease could adversely affect the Company's ability to develop the applicable reserves. Because title to most of the Company's leased properties and mineral rights is not thoroughly verified until a permit is being obtained to mine the property, the Company's right to mine certain of its reserves may be adversely affected if defects in title or boundaries exist. In addition, there can be no assurance that the Company can successfully negotiate new leases or mining contracts for properties containing additional reserves or maintain its leasehold interests in properties on which mining operations are not commenced during the term of the lease.

Management of Growth

As a result of the Arch Western transaction, the Company has experienced rapid growth that has placed and is expected to continue to place a significant strain on its management, operations and other resources. The future success of the Company will depend in part on its ability to successfully integrate the operations acquired in the Arch Western transaction and to attract and retain qualified personnel. The failure to obtain needed personnel or to implement management, operating or financial systems necessary to successfully integrate acquired operations or otherwise manage growth when and as needed could have a material adverse effect on the Company's business, results of operations and financial condition.

Year 2000 Readiness Disclosure

Computer programs used by the Company for financial and operational purposes are being reprogrammed to be "Year 2000" compliant. The "Year 2000 problem" exists because many existing computer programs and embedded chip microprocessors were programmed to read the "00" in a year 2000 entry as 1900, or will fail to recognize "00" as a date at all. Failure to read the date properly or at all may cause miscalculations, or simply cause the program or microprocessor to send errant commands or cease functioning.

Assessment/Remediation Plan - The Company began its assessment of its exposure to the Year 2000 problem prior to the Ashland Coal merger, when, in connection with the necessary integration of two companies' information services technology, a comprehensive plan for achieving an internal information services system free of Year 2000 concerns was adopted. Implementation of this plan commenced upon consummation of this merger, and essentially required company-wide replacement of key financial, informational and operational computer systems with standardized equipment and programs that were programmed to properly process Year 2000 entries. The plan for standardizing key internal systems was modified to incorporate the key internal information systems acquired in the Arch Western transaction.

In April 1998, the Company implemented the first phase of its Year 2000 plan by installing a new Oracle General Ledger running on Year 2000 compliant HP 9000 servers and operating systems. In October 1998, the Company implemented Oracle's Human Resource System and plans to begin implementing a new Oracle Payroll System to all the Company's locations during the first half of 1999. The Company began installation of Mincom Inc. systems in July 1998 to replace non-compliant purchasing, inventory and accounts payable systems. The scheduled completion for installation of these Mincom systems at all the Company's mining locations is October 31, 1999. All desktop computers, network devices and related software are being tested and are replaced if there is a Year 2000 problem. The Company has standardized Windows 95, Office 95, and NT file/printer servers, effective in October 1998.

The Company began the process of evaluating potential Year 2000 problems within its mining and processing equipment and within its systems and processes interfacing with, and hence dependent upon, third party systems, in late 1997. The effort to identify potential Year 2000 problems within the Company's mining and processing equipment and in its interfaces with third parties is ongoing. When complete, customers, financial institutions, vendors, manufacturers, transportation companies and others with which the Company conducts business and where the interruption of such business could have a material adverse affect on the Company will be contacted, and cost effective efforts made to remediate or minimize possible problems.

Assuming the cooperation of third parties in connection with the Company's efforts, the Company believes that it will be able to complete its assessment of material adverse risk associated with Year 2000 problems in its mining and processing equipment and within such third-party systems and processes sufficiently in advance of January 1, 2000, to effect remedial measures where such

measures are possible and cost effective. Arch is in the process of finalizing its assessment and the target date for completing any remedial measures is July 31, 1999.

Costs of Plan - To date, the Company has expended approximately \$6.5 million of the total estimated \$9.5 required to eliminate Year 2000 concerns within the Company's internal information systems. The total costs include not only the elimination of Year 2000 concerns, but also costs for new state-of-the-art systems and costs addressing the Year 2000 concerns for the newly acquired ARCO operations. The cost of the project is based on management's best estimates and there can be no assurance that these estimates will be achieved. Pending completion of the assessment of mining and processing equipment and third-party system and processes risk, no amount can be reasonably estimated for remediation in these areas.

Year 2000 Risk - The risks posed to the Company by the Year 2000 problems are difficult to quantify with certainty. The Company's Year 2000 plan for reconfiguring and standardizing internal information systems to properly process Year 2000 information is dependent upon several factors beyond the Company's immediate control. These factors include, for example, retention of qualified information services personnel in a highly competitive labor market and integrity of local and long distance carriers' Year 2000 telecommunication networks, which will be necessary for operation of the Company's wide area network. In addition, while the estimated completion date of the Company's reconfiguration efforts will permit some testing of the internal systems, the schedule would not likely give the Company adequate time to address defects in the system's Year 2000 processing if vendors' or consultants' warranties with respect to the new systems are not true. The unavailability of the Company's internal information systems for a sustained period would have an adverse effect on the Company. Depending upon the nature of the unavailability of the Company's internal information systems, the adverse effect on the Company could be material.

With respect to the Company's mining and processing equipment, the Company believes the greatest risk posed is that any of its multitude of sampling, processing and loading equipment at its mines, loadouts and terminals cease to function as a result of a processing error not identified and/or corrected in the Company's assessment and remediation plan. Such failures could result in breaches in or defaults under the Company's coal sales contracts (some of which contain prices substantially above current market). Termination of certain or multiple coal sales contracts could have an adverse effect on the Company, and depending on the contracts involved, the adverse effect on the Company could be material.

Finally, the Company believes the greatest Year 2000 risks are posed by the Company's interfaces with third party services, systems and processes. Chief among these risks are the loss of electrical power or transportation services at mine sites where the Company is captive to a single service provider and alternatives are unavailable or economically impractical. Loss of service from any of these single service providers would have an adverse effect on the Company. Depending upon the nature of the loss of service, the adverse effect on the Company could be material.

Contingency Plans - The Company has begun to develop contingency plans for key internal projects that, if delayed, could prevent certain mine operations from gaining access to Year 2000 compliant systems. Likewise, following the Year 2000 assessment of its customers and third-party providers of goods and services, Arch will determine from information that it has received through correspondence and personal contact that if a company's Year 2000 remediation efforts are incomplete and the consequence could be materially adverse, then contingency plans will be developed if economically reasonable.

Factors Routinely Affecting Results of Operations

Any one or a combination of changing demand; fluctuating selling prices; contract penalties, suspensions or terminations; operational, geologic, transportation and

weather-related factors; unexpected regulatory changes; results of litigation; or labor disruptions may occur at times or in a manner that causes results of operations of the Company to deviate from expectations. Any event disrupting substantially all production at any of the Company's principal mines for a prolonged period would have a significant adverse effect on the Company's current and projected results of operations. The effect of such a disruption at Mingo Logan operations would be particularly severe because of the high volume of coal produced by those operations and the relatively high contribution to operating income from the sale of such coal.

To the Stockholders and Board of Directors
Arch Coal, Inc.

We have audited the accompanying consolidated balance sheets of Arch Coal, Inc. and subsidiaries as of December 31, 1998 and 1997 and the related consolidated statements of income, stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. The consolidated financial statements of Arch Coal, Inc. as of December 31, 1996 and for the year then ended were audited by other auditors whose report dated January 16, 1997, expressed an unqualified opinion on those statements.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the 1998 and 1997 financial statements referred to above (appearing on pages 42 to 64 of this Annual Report) present fairly, in all material respects, the consolidated financial position of Arch Coal, Inc. and subsidiaries at December 31, 1998 and 1997, and the consolidated results of their operations and their cash flows for the years then ended, in conformity with generally accepted accounting principles.

Ernst & Young, LLP

Louisville, Kentucky
January 22, 1999

REPORT OF MANAGEMENT

The management of Arch Coal, Inc. is responsible for the preparation of the consolidated financial statements and related financial information in this annual report. The financial statements are prepared in accordance with generally accepted accounting principles and necessarily include some amounts that are based on management's informed estimates and judgments, with appropriate consideration given to materiality.

The Company maintains a system of internal accounting controls designed to provide reasonable assurance that financial records are reliable for purposes of preparing financial statements and that assets are properly accounted for and safeguarded. The concept of reasonable assurance is based on the recognition that the cost of a system of internal accounting controls should not exceed the value of the benefits derived. The Company has a professional staff of internal auditors who monitor compliance with and assess the effectiveness of the system of internal accounting controls.

The Audit Committee of the Board of Directors, composed of directors who are not officers or employees of Arch Coal, Inc., meets regularly with management, the internal auditors, and the independent auditors to discuss matters relating to financial reporting, internal accounting control, and the nature, extent and results of the audit effort. The independent auditors and internal auditors have full and free access to the Audit Committee, with and without management present.

Steven F. Leer
President and Chief Executive Officer

Patrick A. Kriegshauser
Senior Vice President and
Chief Financial Officer

CONSOLIDATED STATEMENTS OF INCOME

	Year Ended December 31		
	1998	1997	1996
(In thousands of dollars except per share data)			
REVENUES			
Coal sales	\$ 1,428,171	\$ 1,034,813	\$ 750,123
Income from equity investment	6,786	--	--
Other revenues	70,678	32,062	30,498
	<u>1,505,635</u>	<u>1,066,875</u>	<u>780,621</u>
COSTS AND EXPENSES			
Cost of coal sales	1,313,400	916,802	669,295
Selling, general and administrative expenses	44,767	28,885	20,435
Amortization of coal supply agreements	34,551	18,063	12,604
Merger-related expenses	--	39,132	--
Other expenses	25,070	22,111	22,175
	<u>1,417,788</u>	<u>1,024,993</u>	<u>724,509</u>
Income from operations	<u>87,847</u>	<u>41,882</u>	<u>56,112</u>
Interest expense, net:			
Interest expense	(62,202)	(17,822)	(18,783)
Interest income	756	721	1,191
	<u>(61,446)</u>	<u>(17,101)</u>	<u>(17,592)</u>
Income before income taxes and extraordinary item	26,401	24,781	38,520
Provision (benefit) for income taxes	(5,100)	(5,500)	5,500
Income before extraordinary item	31,501	30,281	33,020
Extraordinary item from the extinguishment of debt	(1,488)	--	--
NET INCOME	<u>\$ 30,013</u>	<u>\$ 30,281</u>	<u>\$ 33,020</u>
Basic and diluted earnings per common share before extraordinary item			
	<u>\$ 0.79</u>	<u>\$ 1.00</u>	<u>\$ 1.58</u>
Basic and diluted earnings per common share			
	<u>\$ 0.76</u>	<u>\$ 1.00</u>	<u>\$ 1.58</u>

The accompanying notes are an integral part of the consolidated financial statements.

(In thousands of dollars except share and per share data)	December 31	
	1998	1997
ASSETS		
Current assets		
Cash and cash equivalents	\$ 27,414	\$ 9,177
Trade accounts receivable	202,871	133,810
Other receivables	24,584	14,046
Inventories	68,455	50,419
Prepaid royalties	13,559	17,745
Deferred income taxes	8,694	8,506
Other	7,757	9,475
Total current assets	353,334	243,178
Property, plant and equipment		
Coal lands and mineral rights	1,476,703	853,053
Plant and equipment	1,111,120	890,303
Deferred mine development	80,926	102,909
	2,668,749	1,846,265
Less accumulated depreciation, depletion and amortization	(732,005)	(696,339)
Property, plant and equipment, net	1,936,744	1,149,926
Other assets		
Prepaid royalties	31,570	20,826
Coal supply agreements	201,965	185,306
Deferred income taxes	83,209	44,023
Investment in Canyon Fuel	272,149	--
Other	39,249	13,065
Total other assets	628,142	263,220
Total assets	\$ 2,918,220	\$ 1,656,324
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 129,528	\$ 84,692
Accrued expenses	142,630	88,082
Current portion of debt	61,000	29,500
Total current liabilities	333,158	202,274
Long-term debt	1,309,087	248,425
Accrued postretirement benefits other than pension	343,553	323,115
Accrued reclamation and mine closure	150,636	116,199
Accrued workers' compensation	105,333	97,759
Accrued pension cost	18,524	21,730
Other noncurrent liabilities	39,713	35,324
Total liabilities	2,300,004	1,044,826
Stockholders' equity		
Common stock, \$.01 par value, 100,000,000 shares authorized, 39,371,581 issued and outstanding in 1998 and 39,657,898 issued and outstanding in 1997	397	397
Paid-in capital	473,116	472,425
Retained earnings	150,423	138,676
Treasury stock, at cost (333,952 shares)	(5,720)	--
Total stockholders' equity	618,216	611,498
Total liabilities and stockholders' equity	\$ 2,918,220	\$ 1,656,324

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF
STOCKHOLDERS' EQUITY

Three Years Ended December 31, 1998

(In thousands of dollars except share and per share data)

	Common Stock	Paid-In Capital	Retained Earnings	Treasury Stock at cost	Total
Balance at December 31, 1995	\$ 209	\$ 8,392	\$ 105,091	\$ --	\$ 113,692
Net income			33,020		33,020
Dividends paid (\$.38 per share)			(8,000)		(8,000)
Income tax charge related to assets acquired from related parties			(8,086)		(8,086)
Balance at December 31, 1996	209	8,392	122,025	--	130,626
Net income			30,281		30,281
Dividends paid (\$.445 per share)			(13,630)		(13,630)
Issuance of 18,660,054 shares of common stock to stockholders of Ashland Coal, Inc. pursuant to the merger agreement	187	462,984			463,171
Issuance of 49,400 shares of common stock under the stock incentive plan	1	1,049			1,050
Balance at December 31, 1997	397	472,425	138,676	--	611,498
Net income			30,013		30,013
Dividends paid (\$.46 per share)			(18,266)		(18,266)
Issuance of 47,635 shares of common stock under the stock incentive plan		691			691
Treasury stock purchases (333,952 shares)				(5,720)	(5,720)
Balance at December 31, 1998	\$ 397	\$ 473,116	\$ 150,423	\$ (5,720)	\$ 618,216

The accompanying notes are an integral part of the
consolidated financial statements.

(In thousands of dollars)	Year Ended December 31		
	1998	1997	1996
OPERATING ACTIVITIES			
Net income	\$ 30,013	\$ 30,281	\$ 33,020
Adjustments to reconcile to cash provided by operating activities:			
Depreciation, depletion and amortization	204,307	143,632	114,703
Prepaid royalties expensed	19,694	8,216	4,754
Net gain on disposition of assets	(41,512)	(4,802)	(7,959)
Income from equity investment	(6,786)	--	--
Distributions from equity investment	18,850	--	--
Merger-related expenses	--	33,096	--
Changes in operating assets and liabilities	(24,671)	(28,842)	(551)
Other	(11,872)	8,682	(5,496)
Cash provided by operating activities	188,023	190,263	138,471
INVESTING ACTIVITIES			
Payments for acquisition	(1,126,706)	--	--
Additions to property, plant and equipment	(141,737)	(77,309)	(62,490)
Additions to coal supply agreements	--	--	(7,150)
Additions to prepaid royalties	(26,252)	(7,967)	(7,071)
Additions to notes receivable	(10,906)	--	--
Proceeds from dispositions of property, plant and equipment	34,230	5,267	4,073
Cash used in investing activities	(1,271,371)	(80,009)	(72,638)
FINANCING ACTIVITIES			
Proceeds from (payments on) revolver and lines of credit	176,582	78,897	(11,000)
Net proceeds from term loans	958,441	--	--
Payments on notes	(42,860)	(181,110)	(50,619)
Payments for debt issuance costs	(12,725)	--	--
Proceeds from sale and leaseback of equipment	45,442	--	--
Dividends paid	(18,266)	(13,630)	(8,000)
Proceeds from sale of common stock	691	1,050	--
Purchases of treasury stock	(5,720)	--	--
Cash provided (used) in financing activities	1,101,585	(114,793)	(69,619)
Increase (decrease) in cash and cash equivalents	18,237	(4,539)	(3,786)
Cash and cash equivalents, beginning of year	9,177	13,716	17,502
Cash and cash equivalents, end of year	\$ 27,414	\$ 9,177	\$ 13,716
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash paid during the year for interest	\$ 48,760	\$ 18,593	\$ 20,294
Cash paid during the year for income taxes, net of refunds	\$ 29,090	\$ 21,918	\$ 14,731

The accompanying notes are an integral part of the consolidated financial statements.

(in thousands of dollars except share and per share data)

1. ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of Arch Coal, Inc. and its subsidiaries ("the Company"), which operate in the coal mining industry. The Company operates one reportable segment: the production of steam and metallurgical coal from surface and deep mines throughout the United States, for sale to utility, industrial and export markets. The Company's mines are primarily located in the central Appalachian and western regions of the United States. All subsidiaries (except as noted below) are wholly owned. Significant intercompany transactions and accounts have been eliminated in consolidation.

The Company's 65% ownership of Canyon Fuel, LLC (Canyon Fuel) is accounted for on the equity method in the consolidated financial statements as a result of certain super-majority voting rights in the joint venture agreement. Income from Canyon Fuel is reflected in the consolidated statements of income as income from equity investment. (See additional discussion in "Investment in Canyon Fuel" in Note 3).

The Company's 17.5% partnership interest in Dominion Terminal Associates is accounted for on the equity method in the consolidated balance sheets. Allocable costs of the partnership for coal loading and storage are included in other expenses in the consolidated statements of income.

Accounting Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents are stated at cost. Cash equivalents consist of highly liquid investments with an original maturity of three months or less when purchased.

Inventories

Inventories are comprised of the following:

	December 31	
	1998	1997
Coal	\$25,789	\$25,359
Supplies	42,666	25,060
	<u>\$68,455</u>	<u>\$50,419</u>
	=====	=====

Coal and supplies inventories are valued at the lower of average cost or market. The Company has recorded a valuation allowance for slow-moving and obsolete supplies inventories of \$23.9 million and \$17.7 million at December 31, 1998 and 1997, respectively.

Coal Acquisition Costs and Prepaid Royalties

Coal lease rights obtained through acquisitions are capitalized and amortized primarily by the units-of-production method over the estimated recoverable reserves.

Rights to leased coal lands are often acquired through royalty payments. Where royalty payments represent prepayments recoupable against production, they are capitalized, and amounts expected to be recouped within one year are classified as a current asset. As mining occurs on these leases, the prepayment is offset against earned royalties and is included in the cost of coal sales.

Coal Supply Agreements

Acquisition costs related to coal supply agreements (sales contracts) are capitalized and amortized on the basis of coal to be shipped over the term of the contract. Accumulated amortization for sales contracts was \$94.8 million and \$60.3 million at December 31, 1998 and 1997, respectively.

Exploration Costs

Costs related to locating coal deposits and determining the economic mineability of such deposits are expensed as incurred.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Interest costs applicable to major asset additions are capitalized during the construction period. Expenditures which extend the useful lives of existing plant and equipment are capitalized. Costs of purchasing rights to coal reserves and developing new mines or significantly expanding the capacity of existing mines are capitalized and amortized using the units-of-production method over the estimated recoverable reserves. Plant and equipment are depreciated principally on the straight-line method over the estimated useful lives of the assets, which range from three to 20 years.

Asset Impairment

If facts and circumstances suggest that a long-lived asset may be impaired, the carrying value is reviewed. If this review indicates that the value of the asset will not be recoverable, as determined based on projected undiscounted cash flows related to the asset over its remaining life, then the carrying value of the asset is reduced to its estimated fair value.

Revenue Recognition

Coal sales revenues include sales to customers of coal produced at Company operations and purchased from other companies. The Company recognizes revenue from coal sales at the time title passes to the customer. Revenues from sources other than coal sales, including gains and losses from dispositions of long-term assets, are included in other revenues and are recognized as services are performed or otherwise earned.

Interest Rate Swap Agreements

The Company enters into interest-rate swap agreements to modify the interest characteristics of outstanding Company debt. The swap agreements essentially convert variable-rate debt to fixed-rate debt. These agreements require the exchange of amounts based on variable interest rates for amounts based on fixed interest rates over the life of the agreement. The Company accrues amounts to be paid or received under interest-rate swap agreements over the lives of the agreements. Such amounts are recognized as adjustments to interest expense over the lives of agreements, thereby adjusting the effective interest rate on the Company's debt. The fair values of the swap agreements are not recognized in the financial statements. Gains and losses on terminations of interest-rate swap agreements would be deferred on the balance sheet (in other long-term liabilities) and amortized as an adjustment to interest expense over the remaining term of the terminated swap agreement.

Income Taxes

Deferred income taxes are based on temporary differences between the financial statement and tax basis of assets and liabilities existing at each balance sheet date using enacted tax rates for years during which taxes are expected to be paid or recovered.

Stock Based Compensation

These financial statements include the disclosure requirements of Financial Accounting Standards Board Statement No. 123 ("FAS 123"), Accounting for Stock-Based Compensation. With respect to accounting for its stock options, as permitted under FAS 123, the Company has retained the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25 ("APB 25"), Accounting for Stock Issued to Employees, and related Interpretations.

Earnings Per Common Share

In 1997, FAS 128, Earnings per Share, was issued. FAS 128 replaced the calculation of primary and fully diluted earnings per share ("EPS") with basic and diluted EPS. Unlike primary, basic EPS excludes any dilutive effects of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands of dollars except per share and per share data)

options, warrants and convertible securities. Diluted EPS is very similar to the previously reported fully diluted EPS. The adoption of the provisions of FAS 128 did not have any effect on previously reported EPS amounts.

Reclassifications

Certain amounts in the 1997 and 1996 financial statements have been reclassified to conform with the classifications in the 1998 financial statements with no effect on previously reported net income or stockholders' equity.

2. MERGER AND ACQUISITION

On June 1, 1998, the Company acquired the Colorado and Utah coal operations of Atlantic Richfield Company ("ARCO") and simultaneously combined the acquired ARCO operations and the Company's Wyoming operations with ARCO's Wyoming operations in a new joint venture named Arch Western Resources, LLC ("Arch Western"). The principal operating units of Arch Western are Thunder Basin Coal Company, L.L.C., owned 100% by Arch Western, which operates two coal mines in the Southern Powder River Basin in Wyoming; Mountain Coal Company, L.L.C., owned 100% by Arch Western, which operates one coal mine in Colorado; Canyon Fuel Company, LLC ("Canyon Fuel"), 65% owned by Arch Western and 35% by ITOCHU Coal International, Inc., a subsidiary of ITOCHU Corporation, which operates three coal mines in Utah; and Arch of Wyoming, LLC, owned 100% by Arch Western, which operates two coal mines in the Hanna Basin of Wyoming.

Arch Western is 99% owned by the Company and 1% owned by ARCO. The transaction is valued at approximately \$1.14 billion and a wholly owned subsidiary of the Company is the managing member of Arch Western. The transaction has been accounted for under the purchase method of accounting. Accordingly, the cost to acquire ARCO's U.S. coal operations has been allocated to the assets acquired and liabilities assumed according to their respective estimated fair values. Results of operations of the acquired operations are included in the consolidated statements of income effective June 1, 1998. The acquired ARCO operations will continue to produce low-sulfur coal for sale to primarily domestic utility customers.

On July 1, 1997, Ashland Coal, Inc. ("Ashland Coal") merged with a subsidiary of the Company. Under the terms of the merger, Ashland Coal's stockholders received one share of the Company's common stock for each common share of Ashland Coal and 20,500 shares of the Company's common stock for each share of Ashland Coal preferred stock. A total of 18,660,054 shares of Company common stock were issued in the merger, resulting in a total purchase price (including fair value of stock options and transaction related fees) of approximately \$464.8 million. The merger was accounted for under the purchase method of accounting. Results of operations of Ashland Coal are included in the consolidated statements of income effective July 1, 1997.

Summarized below are the unaudited pro forma combined results of operations for the years ended December 31, 1998 and 1997. These results reflect the July 1, 1997 Ashland Coal merger as if it had occurred on January 1, 1997 and the June 1, 1998 Arch Western transaction as if it had occurred on January 1, 1998 and 1997.

	1998	1997
Revenues	\$1,669,824	\$1,792,582
Income before extraordinary item	22,994	36,175
Net income	21,506	36,175
Earnings per share before extraordinary item	\$.58	\$.91
Earnings per share	\$.54	\$.91

In the opinion of the management of the Company, all adjustments necessary to present pro forma results of operations have been made. The unaudited pro forma results of operations do not purport to be indicative of

the results that would have occurred had these transactions actually occurred at the beginning of the relevant periods or of the results of operations that may be achieved in the future.

3. INVESTMENT IN CANYON FUEL

The following tables present unaudited summarized financial information for Canyon Fuel which, as part of the June 1, 1998 Arch Western transaction (described in Note 2), was acquired by the Company and is accounted for on the equity method.

	SEVEN MONTHS ENDED DECEMBER 31, 1998

CONDENSED INCOME STATEMENT INFORMATION	1998

Revenues	\$155,634
Total costs and expenses	153,039

Net income	2,595
Effect of purchase adjustments	4,191

Arch Coal's income from its equity investment in Canyon Fuel	\$ 6,786
	=====

The Company's income from its equity investment in Canyon Fuel represents 65% of Canyon Fuel's net income after adjusting for the effect of its investment in Canyon Fuel. The Company's investment in Canyon Fuel reflects purchase adjustments primarily related to sales contracts, mineral reserves and other property, plant and equipment. The condensed balance sheet information below reflects Canyon Fuel Company LLC's asset and liability values and does not reflect the Company's investment in Canyon Fuel.

	AT DECEMBER 31, 1998

CONDENSED BALANCE SHEET INFORMATION	1998

Current assets	\$ 87,620
Noncurrent assets	532,119
Current liabilities	31,459
Noncurrent liabilities	19,247
Members' equity.....	569,033

4. ACCRUED EXPENSES

Accrued expenses consist of the following:

	December 31	
	1998	1997

Accrued payroll and related benefits	\$ 29,878	\$17,314
Accrued taxes other than income taxes	44,665	22,259
Accrued postretirement benefits other than pension	15,555	14,390
Accrued workers' compensation	15,869	12,649
Accrued interest	17,007	3,566
Other accrued expenses	19,656	17,904
	-----	-----
	\$142,630	\$88,082
	=====	=====

5. INCOME TAXES

Significant components of the provision (benefit) for income taxes are as follows:

	1998	1997	1996

Current:			
Federal	\$ 8,467	\$ 8,250	\$ 9,200
State	(650)	(250)	1,050

Total current	7,817	8,000	10,250
Deferred:			
Federal	(12,517)	(13,100)	(4,050)
State	(400)	(400)	(700)

Total deferred	(12,917)	(13,500)	(4,750)

	\$ (5,100)	\$ (5,500)	\$ 5,500
	=====		

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands of dollars except share and per share data)

A reconciliation of the statutory federal income tax expense (benefit) on the Company's pretax income before extraordinary item to the actual provision (benefit) for income taxes follows: 1998 1997 1996

	1998	1997	1996
Income tax expense			
at statutory rate	\$ 9,240	\$ 8,673	\$ 13,482
Percentage depletion allowance	(14,437)	(13,543)	(10,431)
State taxes, net of effect of federal taxes	(594)	(570)	350
Non-deductible expenses	621	236	1,000
Other, net	70	(296)	1,099
	<u>\$ (5,100)</u>	<u>\$ (5,500)</u>	<u>\$ 5,500</u>

The Company's federal income tax returns for the years ending 1995 and 1996 are currently under review by the Internal Revenue Service (IRS). During 1996, the IRS completed its audits for the tax years 1990 and 1991 and the Company and the IRS agreed to a partial settlement of various tax issues for a payment of \$6.5 million including interest which was charged against previously recorded reserves. Part of the settlement related to the acquisition from the Company's stockholders of certain Illinois coal reserves for \$55.2 million. The acquisition was valued for accounting purposes at the stockholders' net book value of \$22.8 million with the \$32.4 million difference between the net book value and fair market value less \$12.3 million of deferred tax benefits being recorded as a reduction to stockholders' equity. As part of the settlement with the IRS, the Company agreed to adjust the fair market value of the coal properties to \$33.8 million for tax purposes resulting in a decrease to the deferred tax asset of \$8.1 million from \$12.3 million to \$4.2 million. The decrease in the deferred tax asset was charged directly to stockholders' equity in 1996.

During 1997, the Company settled its protest of certain adjustments proposed by the IRS for federal income tax returns for the years 1987 through 1989. A deposit of \$8.0 million was made in April 1997 in anticipation of the settlement and a final payment of approximately \$4.0 million was made in 1998.

During 1998, the Company settled its protest of certain unagreed issues with the IRS for the federal income tax returns for years 1990 and 1991. A final payment of \$0.5 million was paid in June 1998 and charged against previously recorded reserves. The IRS audit of the federal income tax returns for years 1992 through 1994 was completed during 1998 and agreed to at the examination level. A payment of \$15.5 million was made in December 1998 in settlement of all issues. A significant amount of the issues were timing in nature and the tax paid related to these temporary differences is accounted for as a deferred tax asset and the remaining tax and interest paid was charged against previously recorded reserves. A portion of the payment related to items that were settled in the 1987 through 1991 audits previously discussed. Permanent differences included a reduction in percentage depletion and a decrease in cost depletion related to the settlement for the adjustment in fair market value of the Illinois coal reserves.

Management believes that the Company has adequately provided for any income taxes and interest which may ultimately be paid with respect to all open tax years.

Significant components of the Company's deferred tax assets and liabilities that result from carryforwards and

temporary differences between the financial statement basis and tax basis of assets and liabilities are summarized as follows: December 31 1998 1997

	December 31	
	1998	1997
Deferred tax assets:		
Postretirement benefits other than pension	\$136,004	\$129,818
Alternative minimum tax credit carryforward	70,897	80,441
Workers' compensation	29,345	30,503
Reclamation and mine closure	22,567	23,905
Net operating loss carryforwards	10,232	8,214
Other	17,983	28,498
Total deferred tax assets	287,028	301,379
Deferred tax liabilities:		
Coal lands and mineral rights	78,869	86,471
Plant and equipment	78,359	79,962
Deferred mine development	941	3,643
Coal supply agreements	17,390	38,406
Other	19,566	40,368
Total deferred tax liabilities	195,125	248,850
Net deferred tax asset	91,903	52,529
Less current asset	8,694	8,506
Long-term deferred tax asset	\$ 83,209	\$ 44,023

If not used, the carryforwards for net operating losses of \$26.2 million will expire in the years 2008 through 2019. The alternative minimum tax credit carryforward has no statutory expiration date.

The Company is required to record a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized. It is management's belief that the Company's net deferred income tax asset will more likely than not be realized by generating sufficient taxable income in the future.

6. DEBT AND FINANCING ARRANGEMENTS

Debt consists of the following:

	December 31	
	1998	1997
Indebtedness to banks under lines of credit (weighted average rate at December 31, 1998-5.40%; 1997-7.05%)	\$ 12,884	\$ 36,302
Indebtedness to banks under revolving credit agreement, expiring May 31, 2003 (weighted average rate at December 31, 1998-6.27%)	390,000	--
Variable rate fully amortizing term loan payable quarterly through May 31, 2003 (weighted average rate at December 31, 1998-6.16%)	285,000	--
Variable rate non-amortizing term loan due May 31, 2003 (weighted average rate at December 31, 1998-6.87%)	675,000	--
Indebtedness to banks under the 1997 revolving credit agreement	--	190,000
7.79% senior unsecured notes	--	42,860
Other	7,203	8,763
	1,370,087	277,925
Less current portion	61,000	29,500
Long-term debt	\$1,309,087	\$ 248,425

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands of dollars except share and per share data)

On July 1, 1997, concurrent with the Ashland Coal merger, the Company entered into a \$500 million revolving credit agreement which was repaid in its entirety and the facility terminated effective June 1, 1998, using proceeds from a new Company credit facility entered into effective June 1, 1998.

In connection with the Arch Western transaction, the Company entered into two new five-year credit facilities: a \$675 million non-amortizing term loan to Arch Western and a \$900 million credit facility to Arch Coal, including a \$300 million fully amortizing term loan and a \$600 million revolver. Borrowings under the new Arch Coal credit facilities were used to finance the acquisition of ARCO's Colorado and Utah coal operations, to pay related fees and expenses, to refinance existing corporate debt and for general corporate purposes. The Company recognized an extraordinary charge of \$1.5 million (net of a tax benefit of \$.9 million) related to the refinancing of the July 1, 1997 credit facility and the prepayment of its 7.79% senior unsecured notes. Borrowings under the Arch Western credit facility were used to fund a portion of a \$700 million cash distribution by Arch Western to ARCO, which distribution occurred simultaneously with ARCO's contribution of its Wyoming coal operations and certain other assets to Arch Western. The \$675 million term loan is secured by Arch Western's membership interests in its subsidiaries. The Arch Western credit facility is not guaranteed by the Company. The rate of interest on the borrowings under the agreements is, at the Company's option, the PNC Bank base rate or a rate based on LIBOR.

The Company periodically establishes uncommitted lines of credit with banks. These agreements generally provide for short-term borrowings at market rates. At December 31, 1998, there were \$45 million of such agreements in effect, of which \$12.9 million were outstanding at December 31, 1998.

Except for amounts expected to be repaid in 1999, amounts borrowed under the revolving credit agreement and the bank lines of credit are classified as long-term as the Company has the intent and the ability to maintain these borrowings on a long-term basis. Aggregate maturities of debt at December 31, 1998 are \$61.0 million in 1999, \$60.6 million in 2000, \$60.5 million in 2001, \$60.5 million in 2002 and \$1,127.5 million in 2003.

Terms of the Company's credit facilities and leases contain financial and other restrictive covenants that limit the ability of the Company to, among other things, pay dividends, effect acquisitions or dispositions and borrow additional funds, and require the Company to, among other things, maintain various financial ratios and comply with various other financial covenants. Failure by the Company to comply with such covenants could result in an event of default which, if not cured or waived, could have a material adverse effect on the Company.

The Company enters into interest-rate swap agreements to modify the interest characteristics of outstanding Arch Coal debt. At December 31, 1998, the Company had interest-rate swap agreements having a total notional value of \$815 million. These swap agreements are used to convert variable-rate debt to fixed-rate debt. Under these swap agreements, the Company pays a weighted-average fixed rate of 5.54% (before the credit spread over LIBOR) and is receiving a weighted-average variable rate based upon 3 day and 90-day LIBOR. At December 31, 1998, the remaining terms of the swap agreements ranged from 44 to 68 months.

7. FAIR VALUES OF FINANCIAL INSTRUMENTS

The following methods and assumptions were used by the Company in estimating its fair value disclosures for financial instruments:

Cash and cash equivalents: The carrying amounts approximate fair value.

Debt: The carrying amounts of the Company's borrowings under its revolving credit agreement, lines of credit and variable rate term loans approximate their fair value. The fair values of the Company's senior notes and other long-term debt are estimated using discounted cash flow analyses,

based on the Company's current incremental borrowing rates for similar types of borrowing arrangements at the end of each year presented.

Interest rate swaps: The fair values of interest rate swaps are based on quoted market prices, which reflect the present value of the difference between estimated future amounts to be paid and received.

The carrying amounts and fair values of the Company's financial instruments at December 31, 1998 and 1997 are as follows:

	1998		1997	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Cash and cash equivalents	\$ 27,414	\$ 27,414	\$ 9,177	\$ 9,177
Lines of credit	12,884	12,884	36,302	36,302
Revolving credit agreements	390,000	390,000	190,000	190,000
Variable rate term loans	960,000	960,000	--	--
Senior notes	--	--	42,860	\$ 4,690
Other debt	7,203	7,203	8,763	8,763
Interest rate swaps	--	(14,151)	--	(93)

8. ACCRUED WORKERS' COMPENSATION

The Company is liable under the federal Mine Safety and Health Act of 1977, as amended, to provide for pneumoconiosis (black lung) benefits to eligible employees, former employees, and dependents with respect to claims filed by such persons on or after July 1, 1973. The Company is also liable under various states' statutes for black lung benefits. The Company currently provides for federal and state claims principally through a self-insurance program. Charges are being made to operations as determined by independent actuaries, at the present value of the actuarially computed present and future liabilities for such benefits over the employees' applicable years of service. In addition, the Company is liable for workers' compensation benefits for traumatic injuries which are accrued as injuries are incurred. Workers' compensation costs (credits) include the following components:

	1998	1997	1996
Self-insured black lung benefits:			
Service cost	\$ 1,022	\$ 678	\$ 639
Interest cost	3,173	2,353	1,735
Net amortization and deferral	111	(10,084)	(9,766)
	4,306	(7,053)	(7,392)
Other workers' compensation benefits	19,396	12,182	13,350
	\$ 23,702	\$ 5,129	\$ 5,958

The actuarial assumptions used in the determination of black lung benefits included a discount rate of 7.0% as of December 31, 1998 (7.25% and 7.5% as of December 31, 1997 and 1996, respectively) and a black lung benefit cost escalation rate of 4% in 1998, 1997 and 1996. In consultation with independent actuaries, the Company changed the discount rate, black lung benefit cost escalation rate, rates of disability and other assumptions used in the actuarial determination of black lung liabilities as of January 1, 1993, to better reflect actual experience. The effect of these changes was a significant increase in the unrecognized net gain. This gain was amortized through 1997 and totaled \$10.8 million (before tax) and \$6.6 million (after tax) in each of the years 1997 and 1996.

Summarized below is information about the amounts recognized in the consolidated balance sheets for workers' compensation benefits:

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands of dollars except share and per share data)

	December 31,	
	1998	1997
Actuarial present value for self-insured black lung:		
Benefits contractually recoverable from others	\$ 4,649	\$ 5,053
Benefits for Company employees	51,137	42,677
Accumulated black lung benefit obligation	55,786	47,730
Unrecognized net loss	(1,722)	(3,004)
	54,064	44,726
Traumatic and other workers' compensation	67,138	65,682
Accrued workers' compensation	121,202	110,408
Less amount included in accrued expenses	15,869	12,649
	\$ 105,333	\$ 97,759

Receivables related to benefits contractually recoverable from others of \$4,649 in 1998 and \$5,053 in 1997 are recorded in other long-term assets.

9. ACCRUED RECLAMATION AND MINE CLOSING COSTS

The federal Surface Mining Control and Reclamation Act of 1977 and similar state statutes require that mine property be restored in accordance with specified standards and an approved reclamation plan. The Company accrues for the costs of final mine closure reclamation over the estimated useful mining life of the property. These costs relate to reclaiming the pit and support acreage at surface mines and sealing portals at deep mines. Other costs of final mine closure common to both types of mining are related to reclaiming refuse and slurry ponds. The Company also accrues for significant reclamation that is completed during the mining process prior to final mine closure. The establishment of the final mine closure reclamation liability and the other ongoing reclamation liability is based upon permit requirements and requires various estimates and assumptions, principally associated with costs and productivities. The Company accrued \$12.5 million, \$10.8 million and \$6.1 million in 1998, 1997 and 1996, respectively, for current and final mine closure reclamation excluding reclamation recosting adjustments identified below. Cash payments for final mine closure reclamation and current disturbances approximated \$15.0 million, \$8.5 million and \$9.8 million for 1998, 1997 and 1996, respectively. Periodically, the Company reviews its entire environmental liability and makes necessary adjustments, including permit changes as granted by state authorities and revisions to costs and productivities, to reflect current experience. These recosting adjustments are recorded in cost of coal sales. Adjustments included an increase in the liability of \$4.9 million in 1998, and decreases in the liability were \$4.4 million and \$4.5 million in 1997 and 1996, respectively. The Company's management believes it is making adequate provisions for all expected reclamation and other costs associated with mine closures.

10. EMPLOYEE BENEFIT PLANS

Defined Benefit Pension and Other Postretirement Benefit Plans.

The Company has non-contributory defined benefit pension plans covering certain of its salaried and non-union hourly employees. Benefits are generally based on the employee's years of service and compensation. The Company funds the plans in an amount not less than the minimum statutory funding requirements nor more than the maximum amount that can be deducted for federal income tax purposes.

The Company also currently provides certain postretirement health and life insurance coverage for eligible employees. Generally, covered employees who terminate employment after meeting the eligibility requirements for pension benefits are also eligible for postretirement coverage for themselves and their dependents. The salaried employee postretirement medical and dental plans are contributory,

with retiree contributions adjusted periodically, and contain other cost-sharing features such as deductibles and coinsurance. The postretirement medical plan for retirees who were members of the UMWA is not contributory. The Company's current funding policy is to fund the cost of all postretirement health and life insurance benefits as they are paid. Summaries of the changes in the benefit obligations, plan assets (primarily listed stocks and debt securities) and funded status of the plans are as follows:

	Pension benefits		Other postretirement benefits	
	1998	1997	1998	1997
CHANGE IN BENEFIT OBLIGATIONS				
Benefit obligations at January 1	\$ 84,085	\$ 56,710	\$ 333,908	\$ 220,332
Service cost	5,841	2,788	3,715	3,717
Interest cost	8,137	4,970	23,101	19,546
Benefits paid	(8,562)	(2,769)	(13,224)	(10,442)
Plan amendments	(3,809)	--	(15,924)	--
Acquisition of ARCO Coal operations in 1998 and the Ashland Coal merger in 1997	39,674	20,015	13,625	88,841
Other-primarily actuarial (gain) loss	14,067	2,371	(9,378)	11,914
Benefit obligations at December 31	\$ 139,433	\$ 84,085	\$ 335,823	\$ 333,908
CHANGE IN PLAN ASSETS				
Value of plan assets at January 1	\$ 64,577	\$ 45,929	\$ --	\$ --
Actual return on plan assets	21,771	7,339	--	--
Employer contributions	8,346	499	13,224	10,442
Acquisition of ARCO Coal operations in 1998 and the Ashland Coal merger in 1997	41,142	13,579	--	--
Benefits paid	(8,562)	(2,769)	(13,224)	(10,442)
Value of plan assets at December 31	\$ 127,274	\$ 64,577	\$ --	\$ --
FUNDED STATUS OF THE PLANS				
Accumulated obligations less plan assets	\$ 12,159	\$ 19,508	\$ 335,823	\$ 333,908
Unrecognized actuarial gain (loss)	6,920	3,451	6,918	(2,179)
Unrecognized net transition asset	887	1,085	--	--
Unrecognized prior service gain (cost)	2,667	(879)	16,367	5,776
Net liability recognized	\$ 22,633	\$ 23,165	\$ 359,108	\$ 337,505
BALANCE SHEET LIABILITIES (ASSETS)				
Prepaid benefit costs	\$ (1,092)	\$ --	\$ --	\$ --
Accrued benefit liabilities	23,725	23,165	359,108	337,505
Net liability recognized	\$ 22,633	\$ 23,165	\$ 359,108	\$ 337,505

The Company's primary defined benefit pension plan was amended January 1998 to a cash balance plan, which resulted in a \$3.8 million gain. Changes in demographic information resulted in a \$14.1 million actuarial loss for 1998. In addition, a January 1997 amendment to the postretirement benefit plan resulted in a \$15.9 million gain. The gain resulted from the implementation of a defined dollar benefit cap which limits the Company's disbursements under the plan. The \$9.4 million actuarial gain resulted from favorable claims experience compared to previous projections.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands of dollars except share and per share data)

	Pension benefits		Other postretirement benefits	
	1998	1997	1998	1997
Weighted Average Assumptions as of December 31				
Discount rate.....	7.00%	7.25%	7.00%	7.25%
Rate of compensation increase.....	4.75%	5.00%	N/A	N/A
Expected return on plan assets.....	9.00%	9.00%	N/A	N/A
Health care cost trend on covered charges.....	N/A	N/A	4.5%	6.0% in 1998; 5.0% thereafter

The following table details the components of pension and other postretirement benefit costs.

	Pension benefits			Other postretirement benefits		
	1998	1997	1996	1998	1997	1996
Service cost.....	\$5,841	\$ 2,788	\$2,295	\$ 3,715	\$ 3,717	\$ 2,246
Interest cost.....	8,137	4,970	4,051	23,101	19,546	15,648
Expected return on plan assets.....	(7,521)	(4,391)	(3,520)	--	--	--
Other amortization and deferral.....	790	(503)	642	(2,884)	(2,573)	(1,527)
	<u>\$7,247</u>	<u>\$ 2,864</u>	<u>\$3,468</u>	<u>\$23,932</u>	<u>\$20,690</u>	<u>\$16,367</u>

The health care cost trend rate assumption has a significant effect on the amounts reported. For example, increasing the assumed health care cost trend rate by one percentage point each year would increase the accumulated postretirement obligation as of December 31, 1998 by \$48.0 million, or 14.3%, and the net periodic postretirement benefit cost for 1998 by \$4.2 million, or 20.0%.

Multiemployer Pension and Benefit Plans

Under the labor contract with the United Mine Workers of America ("UMWA"), the Company made payments of \$1.3 million, \$2.0 million and \$1.9 million in 1998, 1997 and 1996, respectively, into a multiemployer defined benefit pension plan trust established for the benefit of union employees. Payments are based on hours worked and are expensed as paid. Under the Multiemployer Pension Plan Amendments Act of 1980, a contributor to a multiemployer pension plan may be liable, under certain circumstances, for its proportionate share of the plan's unfunded vested benefits (withdrawal liability). The Company has estimated its share of such amount to be \$53.4 million at December 31, 1998. The Company is not aware of any circumstances which would require it to reflect its share of unfunded vested pension benefits in its financial statements.

The Coal Industry Retiree Health Benefit Act of 1992 ("Benefit Act") provides for the funding of medical and death benefits for certain retired members of the UMWA through premiums to be paid by assigned operators (former employers), transfers of monies in 1993 and 1994 from an overfunded pension trust established for the benefit of retired UMWA members, and transfers from the Abandoned Mine Lands Fund (funded by a federal tax on coal production) commencing in 1995. The Company treats its obligation under the Benefit Act as a participation in a multiemployer plan and recognizes expense as premiums are paid. The Company recognized \$3.7 million in 1998, \$3.9 million in 1997 and \$2.8 million in 1996 in expense relative to premiums paid pursuant to the Benefit Act.

Other Plans

The Company sponsors savings plans which were established to assist eligible employees in providing for their future retirement needs. The Company's contributions to the plans were \$6.8 million in 1998, \$4.6 million in 1997 and \$3.4 million in 1996.

11. CAPITAL STOCK

On April 4, 1997, the Company changed its capital stock whereby the number of authorized shares was increased to 100,000,000 common shares, the par value was changed to \$.01 per share, and a common stock split of 338.0857-for-one was effected. All share and per share information reflect the stock split.

On September 29, 1998, Arch Coal's Board of Directors authorized the Company to repurchase up to 2 million shares of Company common stock. The timing of the purchases and the number of shares to be purchased are dependent on market conditions. As of December 31, 1998, the Company has acquired 330,200 shares under the repurchase program at the average price of \$17.08 per share.

12. STOCK INCENTIVE PLAN

On April 22, 1998, the stockholders ratified the adoption of the 1997 Stock Incentive Plan (the "Company Incentive Plan") reserving 6,000,000 shares of Arch Coal common stock for awards to officers and other selected key management employees of the Company. The Company Incentive Plan provides the Board of Directors with the flexibility to grant stock options, stock appreciation rights (SARs), restricted stock, restricted stock units, performance stock, performance units, merit awards, phantom stock awards and rights to acquire stock through purchase under a stock purchase program ("Awards"). Stock options outstanding under the Ashland Coal stock incentive plans at the date of the merger were substituted for fully vested stock options in the Company Incentive Plan (and are exercisable on the same terms and conditions including per share exercise prices as were applicable to such options when granted.) Stock options generally become exercisable in full or in part one year from the date of grant and are granted at a price equal to 100% of the fair market value of the stock on the date of grant. SARs entitle employees to receive a payment equal to the appreciation in market value of the stated number of common shares from the SARs exercise price to the market value of the shares on the date of its exercise. Unexercised options and SARs' lapse 10 years after the date of grant. Restricted stock awards entitle employees to purchase shares at a nominal cost. Such awards entitle employees to vote shares acquired and to receive any dividends thereon, but such shares cannot be sold or transferred and are subject to forfeiture if employees terminate their employment prior to the prescribed period, which can be from one to five years. Merit awards are grants of stock without restriction and at a nominal cost. Performance share or unit awards can be earned by the recipient if the Company meets certain pre-established performance measures. Until earned, the performance awards are nontransferable, and when earned, performance awards are payable in cash, stock, or restricted stock as determined by the Board of Directors. Phantom stock awards are based on the appreciation of hypothetical underlying shares or the earnings performance of such shares and may be paid in cash or in shares. As of December 31, 1998, performance shares and stock options were the only type of Awards granted. As of December 31, 1998, 361,550 phantom performance

(in thousands of dollar except share and per share data)

shares had been granted and will be earned by participants based on Company performance for the years 1998 through 2001. Information regarding stock options under the Company Incentive Plan is as follows for the year ended December 31, 1998 and 1997:

	1998		1997	
	Common Shares	Weighted Average Price	Common Shares	Weighted Average Price
Options outstanding at January 1	926	\$ 25.23	--	\$ --
Issued in exchange for Ashland Coal stock options	--	--	675	23.69
Granted	360	22.88	300	27.88
Exercised	(48)	14.50	(49)	21.25
Canceled	(110)	25.88	--	--
	-----		-----	
Options outstanding at December 31	1,128	24.86	926	25.23
	=====		=====	
Options exercisable at December 31	600	\$ 25.04	626	\$ 23.88
Options available for grant at December 31	4,413		4,684	

The Company applies APB 25, Accounting for Stock Issued to Employees, and related Interpretations in accounting for the Company Incentive Plan. Accordingly, no compensation expense has been recognized for the fixed stock option portion of the Company Incentive Plan. Had compensation expense for the fixed stock option portion of the Company Incentive Plan been determined based on the fair value at the grant dates for awards under this plan consistent with the method of FAS 123, Accounting for Stock-Based Compensation, the Company's net income and earnings per common share would have been reduced to the pro forma amounts in the table below. The fair value of options granted in 1998 and 1997 was determined to be \$2.3 million and \$2.5 million, respectively, using the Black-Scholes option pricing model and the weighted average assumptions noted below. For purposes of these pro forma disclosures, the estimated fair value of the options is recognized as compensation expense over the options' vesting period. The stock options granted in 1998 and 1997 vest ratably over three years.

	1998	1997
Pro Forma		
Net income (in millions)	\$ 29.3	\$ 30.1
Basic and diluted earnings per share	\$.74	\$.98
	-----	-----
Weighted average fair value per share of options granted	\$ 7.22	\$ 8.36
	-----	-----
Assumptions (weighted average)		
Risk-free interest rate	6.0%	6.3%
Expected dividend yield	2.0%	2.0%
Expected volatility	31.8%	29.0%
Expected life (in years)	5.0	5.0

The pro forma effect on net income for 1998 and 1997 is not representative of the pro forma effect on net income in future years because it does not take into consideration pro forma compensation expense related to grants issued prior to 1996.

Exercise prices for options outstanding as of December 31, 1998, range from \$17.25 to \$34.375, and the weighted average remaining contractual life at that date was 7.2 years. The table below shows pertinent information on options outstanding at December 31, 1998, priced below \$25 per share and priced at \$25 per share or more:

	Option Exercise Price	
	Below \$25	\$25 or More
Options outstanding (in thousands)	607	521
Weighted-average exercise price	\$ 22.20	\$ 27.96
Weighted-average remaining contractual life (in years)	7.4	6.9
Options currently exercisable (in thousands)	264	336
Weighted-average exercise price of options currently exercisable	\$ 21.33	\$ 28.01

13. MERGER RELATED EXPENSES AND CHANGES IN ESTIMATES

During 1997, in connection with the Ashland Coal merger, the Company recorded a one-time charge of \$39.1 million (before tax) or \$23.8 million (after tax) comprised of termination benefits and relocation costs of \$8.1 million and costs of \$31.0 million associated with the idling of duplicate facilities. The \$8.1 million costs arising from the termination benefits and relocation costs have been paid. The \$31.0 million costs associated with the idling of duplicate facilities reduced the book value of the duplicate facilities. A portion of this charge related to Big Sandy Terminal. As a result of a change in management strategy related to the Big Sandy Terminal, the assets were sold in 1998 for a pre-tax gain of \$7.5 million.

During 1996, the Company reduced the estimated useful lives of certain long-lived assets (primarily related to life-of-mine assets including preparation plants and beltlines) for depreciation and amortization purposes. These changes in estimates were primarily due to increased productivities and reductions in recoverable reserves. As a result, an additional \$11.3 million (after-tax impact of \$6.9 million or \$.33 per share) of depreciation and amortization expense was recorded in cost of coal sales. The assets included a preparation plant that had an original life of 16 years that was adjusted to 7.5 years, a preparation plant and beltline related to a surface mine that carried an original life of 20 years that was adjusted to 17 years and deferred mine development for a surface mine with an original life of 5 years adjusted to 4 years.

14. CONCENTRATION OF CREDIT RISK AND MAJOR CUSTOMERS

The Company places its cash equivalents in investment-grade short-term investments and limits the amount of credit exposure to any one commercial issuer.

The Company markets its coal principally to electric utilities in the United States. As of December 31, 1998 and 1997, accounts receivable from electric utilities located in the United States totaled \$152.1 million and \$102.8 million, respectively. Generally, credit is extended based on an evaluation of the customer's financial condition, and collateral is not generally required. Credit losses are provided for in the financial statements and historically have been minimal.

(in thousands of dollars except share and per share data)

The Company is committed under long-term contracts to supply coal that meets certain quality requirements at specified prices. These prices are generally adjusted based on indices. Quantities sold under some of these contracts may vary from year to year within certain limits at the option of the customer. Sales (including spot sales) to major customers were as follows:

	1998	1997	1996
AEP	\$195,682	\$129,981	\$ 86,756
Southern Company	170,452	187,800	147,567

15. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per common share:

	1998	1997	1996
Numerator:			
Income before extraordinary item	\$ 31,501	\$30,281	\$33,020
Extraordinary item	(1,488)	--	--
Net income	\$ 30,013	\$30,281	\$33,020
Denominator:			
Weighted average shares-denominator for basic	39,626	30,374	20,948
Dilutive effect of employee stock options	25	34	--
Adjusted weighted average shares-denominator for diluted	39,651	30,408	20,948
Basic and diluted earnings per common share before extraordinary item	\$.79	\$ 1.00	\$ 1.58
Basic and diluted earnings per common share	\$.76	\$ 1.00	\$ 1.58

16. SALE AND LEASEBACK

On January 29, 1998, the Company sold mining equipment for approximately \$74.2 million and leased back the equipment under an operating lease with a term of three years. This included the sale and leaseback of equipment purchased under an existing operating lease that expired on the same day. The proceeds of the sale were used to purchase the equipment under the expired lease for \$28.3 million and to pay down debt. At the end of the lease term, the Company has the option to renew the lease for two additional one-year periods or purchase the equipment for approximately \$51.1 million. Alternatively, the equipment may be sold to a third party. In the event of such a sale, the Company will be required to make a payment to the lessor in the event, and to the extent, that the proceeds are below \$40.0 million. The gain on the sale and leaseback of \$10.7 million was deferred and is being amortized over the base term of the lease as a reduction of rental expense.

17. RELATED PARTY TRANSACTIONS

In the ordinary course of business, the Company receives certain services and purchases fuel, oil and other products on a competitive basis from subsidiaries of Ashland Inc., which totaled \$7.2 million in 1998, \$4.7 million in 1997 and \$3.8 million in 1996. At December 31, 1998, Ashland Inc. owns approximately 55% of the Company's outstanding shares of common stock. Management believes that charges between the Company and Ashland Inc. for services and purchases were concluded on terms equivalent to those prevailing among unaffiliated parties.

As described in Note 1, the Company has a 65% ownership interest in Canyon Fuel which is accounted for on the equity method. The Company receives administration and production fees from Canyon Fuel for managing the Canyon Fuel operations. The fees recognized as other income for the Company and as expense by Canyon Fuel for the year ended December 31, 1998 were \$4.1 million.

18. COMMITMENTS AND CONTINGENCIES

The Company leases equipment, land and various other properties under noncancelable long-term leases, expiring at various dates. Rental expense related to these operating leases amounted to \$31.4 million in 1998, \$14.9 million in 1997 and \$8.5 million in 1996. The Company has also entered into various noncancelable royalty lease agreements and federal lease bonus payments under which future minimum payments are due. On October 1, 1998, the Company was the successful bidder in a federal auction of certain mining rights in the 3,546-acre Thundercloud tract in the Powder River Basin of Wyoming. The Company's lease bonus bid amounted to \$158 million for the tract, of which \$31.6 million was paid on October 1, 1998 (the remaining lease bonus payments are reflected below under the caption "Royalties"). The tract contains approximately 412 million tons of demonstrated coal reserves and is contiguous with the Company's Black Thunder mine. Geological surveys performed by outside consultants indicate that there are sufficient reserves relative to these properties to permit recovery of the Company's investment.

Minimum payments due in future years under these agreements in effect at December 31, 1998 are as follows:

	Leases	Royalties
1999	\$ 31,975	\$ 62,375
2000	28,092	62,151
2001	22,311	61,809
2002	16,726	61,589
2003	8,284	30,282
Thereafter	10,564	225,824
	-----	-----
	\$117,952	\$504,030
	=====	=====

The Company is a party to numerous claims and lawsuits with respect to various matters. The Company provides for costs related to contingencies when a loss is probable and the amount is reasonably determinable. As of December 31, 1998, the Company estimates that its probable aggregate loss as a result of such claims is \$3.8 million (included in other noncurrent liabilities) and believes that probable insurance recoveries of \$.9 million (included in other assets) related to these claims will be realized. The Company estimates that its reasonably possible aggregate losses from all currently pending litigation could be as much as \$.4 million (before tax) in excess of the probable loss previously recognized. However, the Company believes it is probable that substantially all of such losses, if any occur, will be insured. After conferring with counsel, it is the opinion of management that the ultimate resolution of these claims, to the extent not previously provided for, will not have a material adverse effect on the consolidated financial condition, results of operations or liquidity of the Company.

A customer of the Company has informed the Company that one of the customer's power plants will no longer provide baseload capacity to a public utility and instead will be used to provide peak demand only. As a result, the plant will require substantially less coal under the customer's existing above-market contract with the Company. The Company has filed a civil action in Federal District Court in the Southern District of West Virginia alleging breach of contract and other causes of action against the customer in respect of the customer's failure to comply with the terms of this contract. On July 17, 1998 the court granted the customer's motion to stay the lawsuit pending arbitration. As of December 31, 1998, the carrying amount of acquisition costs allocated to this coal supply contract amounts to approximately \$13.7 million. The Company currently expects that it will recover the carrying amount of this asset, however, the ultimate outcome of this matter is uncertain.

The Company holds a 17.5% general partnership interest in Dominion Terminal Associates ("DTA"), which operates a ground storage-to-vessel coal transloading facility in Newport News, Virginia. DTA leases the facility from Peninsula Ports Authority of Virginia ("PPAV") for amounts sufficient to meet debt-service requirements. Financing is provided through \$132.8 million of tax-exempt bonds issued by PPAV which mature July 1, 2016. Under the terms of a throughput and handling agreement with DTA, each partner is charged its share of cash operating and

(in thousands of dollars except share and per share data)

debt-service costs in exchange for the right to use its share of the facility's loading capacity and is required to make periodic cash advances to DTA to fund such costs. On a cumulative basis, costs exceeded cash advances by \$9.2 million at December 31, 1998 (included in other noncurrent liabilities). Future payments for fixed operating costs and debt service are estimated to approximate \$3.3 million annually through 2015 and \$26.0 million in 2016.

19. CASH FLOW

The changes in operating assets and liabilities as shown in the consolidated statements of cash flows are comprised of the following:

	1998	1997	1996

Decrease (increase) in operating assets:			
Receivables	\$ (35,464)	\$ (12,179)	\$10,857
Inventories	6,723	16,323	4,024
Increase (decrease) in operating liabilities:			
Accounts payable and accrued expenses	30,229	5,403	(7,464)
Income taxes	(35,057)	(27,448)	(1,145)
Accrued postretirement benefits other than pension	6,813	7,437	4,566
Accrued reclamation and mine closure	1,936	(9,370)	(10,492)
Accrued workers' compensation	149	(9,008)	(897)

Changes in operating assets and liabilities	\$ (24,671)	\$ (28,842)	\$ (551)
	=====		

20. ACCOUNTING DEVELOPMENT

In June 1998, the Financial Accounting Standards Board issued FAS 133, Accounting for Derivative Instruments and Hedging Activities, which is required to be adopted in years beginning after June 15, 1999. FAS 133 permits early adoption as of the beginning of any fiscal quarter after its issuance. FAS 133 will require the Company to recognize all derivatives on the balance sheet at fair value. Derivatives that are not hedges must be adjusted to fair value through income. If the derivative is a hedge, depending on the nature of the hedge, changes in the fair value of the derivative will either be offset against the change in fair value of the hedged assets, liabilities, or firm commitments through earnings or recognized in other comprehensive income until the hedged item is recognized in earnings. The ineffective portion of a derivative's change in fair value will be immediately recognized in earnings. The Company has not yet determined what effect FAS 133 will have on the earnings and financial position of the Company.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands of dollars except share and per share data)

21. QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

Quarterly financial data for 1998 and 1997 is summarized below:

	March 31	June 30	Sept. 30	Dec. 31
1998:				
Coal sales, equity income and other revenues	\$312,564 (1)	\$353,238	\$ 424,123 (2)	\$415,710
Income from operations	22,359	27,450	23,909	14,129 (3)
Income before extraordinary item	15,821	14,999	544	137
Net income	15,821	13,511	544	137
Basic and diluted earnings per				
common share before extraordinary item(5)	0.40	0.38	0.01	0.00
Basic and diluted earnings per common share(5)	0.40	0.34	0.01	0.00
1997:				
Coal sales and other revenues	\$198,461	\$196,425	\$ 329,475	\$342,514
Income (loss) from operations	16,314	16,296	(20,468) (4)	29,740
Net income(loss)	10,420	11,732	(13,001)	21,130
Basic and diluted earnings (loss) per common share(5)	0.50	0.56	(0.33)	0.53

- (1) During the first quarter of 1998, the Company recorded gains on the sale of surplus land totaling \$7.9 million.
- (2) During the third quarter of 1998, the Company sold idle assets and reserves in Eastern Kentucky for a gain of \$18.5 million.
- (3) During the fourth quarter of 1998, the Company sold its idle Big Sandy Terminal for a gain of \$7.5 million. This was partially offset by a net unfavorable adjustment of \$4.9 million associated with the Company's routine, periodic review of reclamation accruals.
- (4) During the third quarter of 1997, the Company recorded a \$39.1 million charge in connection with the Ashland Coal merger comprised of termination benefits, relocation costs and costs associated with the idling of duplicate facilities.
- (5) The sum of the quarterly earnings per common share amounts may not equal earnings per common share for the full year because per share amounts are computed independently for each quarter and for the year based on the weighted average number of common shares outstanding during each period.

(In thousands, except per share data)	Years Ended December 31,				
	1998 (2,3)	1997 (4,5)	1996	1995 (6,7)	1994
Income Statement Data:					
Coal sales, equity income and other revenues	\$ 1,505,635	\$ 1,066,875	\$780,621	\$ 737,838	\$785,287
Costs and expenses:					
Cost of coal sales	1,313,400	916,802	669,295	657,529	648,091
Selling, general and administrative expenses	44,767	28,885	20,435	19,680	21,758
Amortization of coal supply agreements	34,551	18,063	12,604	13,374	15,346
Merger-related expenses	--	39,132	--	--	--
Write-down of impaired assets	--	--	--	10,241	--
Restructuring expenses	--	--	--	8,250	--
Other expenses	25,070	22,111	22,175	18,739	35,150
Income from operations	87,847	41,882	56,112	10,025	64,942
Interest expense, net	61,446	17,101	17,592	22,962	21,582
Provision (benefit) for income taxes	(5,100)	(5,500)	5,500	(1,900)	8,200
Income (loss) before extraordinary item	31,501	30,281	33,020	(11,037)	35,160
Extraordinary item	(1,488)	--	--	--	--
Net income (loss)	\$ 30,013	\$ 30,281	\$ 33,020	\$ (11,037)	\$ 35,160
Balance Sheet Data:					
Total assets	\$ 2,918,220	\$ 1,656,324	\$885,521	\$ 940,768	\$993,361
Working capital	20,176	40,904	33,166	40,077	27,512
Long-term debt, less current maturities	1,309,087	248,425	212,695	274,314	308,166
Other long-term obligations	657,759	594,127	421,754	429,993	413,209
Stockholders' equity	618,216	611,498	130,626	113,692	131,426
Common Stock Data:					
Basic and diluted earnings (loss) per common share before extraordinary item					
	\$ 0.79	\$ 1.00	\$ 1.58	\$ (0.53)	\$ 1.68
Basic and diluted earnings (loss) per common share					
	\$ 0.76	\$ 1.00	\$ 1.58	\$ (0.53)	\$ 1.68
Dividends per share					
	\$.46	\$.445	\$.38	\$.32	\$ --
Shares outstanding at year-end					
	39,372	39,658	20,948	20,948	20,948
Cash Flow Data:					
Cash provided by operating activities	\$ 188,023	\$ 190,263	\$138,471	\$ 98,159	\$ 81,273
Depreciation, depletion and amortization	204,307	143,632	114,703	100,101	99,431
Purchases of property, plant and equipment	141,737	77,309	62,490	80,347	96,717
Dividend payments	18,266	13,630	8,000	6,697	--
EBITDA(8)	313,500	224,646	170,815	128,617	164,373
Operating Data:					
Tons sold	81,098	40,525	29,443	26,742	27,898
Tons produced	75,817	36,698	26,887	25,562	27,383
Tons purchased from third parties	4,997	2,906	2,062	1,218	1,190

SELECTED FINANCIAL INFORMATION(1)

- (1) Certain amounts for years prior to 1998 have been reclassified to conform with the 1998 classifications with no effect on previously reported net income (loss) or stockholders' equity.
- (2) Information for 1998 reflects the acquisition of Atlantic Richfield Company's domestic coal operations on June 1, 1998. As a result of the refinancing of Company debt resulting from the acquisition, the Company incurred an extraordinary charge of \$1.5 million (net of a tax benefit) related to the early extinguishment of debt which existed prior to the acquisition.
- (3) Income from operations for 1998 reflects pre-tax gains of \$41.8 million from the disposition of assets including \$18.5 million and \$7.5 million on the sale of certain assets and property in eastern Kentucky and the sale of the Company's idle Big Sandy Terminal, respectively.
- (4) Information for 1997 reflects the merger with Ashland Coal on July 1, 1997.
- (5) Income from operations for 1997 reflects a \$39.1 million charge in connection with the Ashland Coal merger comprised of termination benefits, relocation costs and costs associated with the idling of duplicate facilities.
- (6) Income from operations for 1995 reflects charges of \$18.5 million for restructuring and asset write-downs.
- (7) On July 31, 1995, the Company sold its timber rights to approximately 100,000 acres of property in the eastern United States for a gain of \$8.4 million.
- (8) EBITDA is defined as income from operations before the effect of changes in accounting principles and extraordinary items, merger-related costs and unusual items (Notes 2, 5 and 6 above), net interest expense, income taxes, depreciation, depletion and amortization for Arch Coal, its subsidiaries and its ownership percentage in its equity investments. EBITDA is presented because it is a widely accepted financial indicator of a company's ability to incur and service debt. EBITDA should not be considered in isolation or as an alternative to net income, operating income, cash flows from operations or as a measure of a company's profitability, liquidity or performance under generally accepted accounting principles. This measure of EBITDA may not be comparable to similar measures reported by other companies, or EBITDA may be computed differently by the Company in different contexts (i.e., public reporting versus computations under financing arrangements).

STOCKHOLDER INFORMATION

COMMON STOCK

Arch Coal's Common Stock is listed and traded on the New York Stock Exchange and also has unlisted trading privileges on the Chicago Stock Exchange. The ticker symbol is ACI.

	Quarter Ended*			
	March 31 1997	June 30 1997	Sept. 30 1997	Dec. 31 1997
Dividends per common share	\$.108	\$.108	\$.115	\$.115
High			\$ 30 3/8	\$30 5/16
Low			\$ 27 1/8	\$ 24 5/8
Close			\$28 9/16	\$ 27 3/8

	Quarter Ended			
	March 31 1998	June 30 1998	Sept. 30 1998	Dec. 31 1998
Dividends per common share	\$.115	\$.115	\$.115	\$.115
High	\$29	\$27 7/16	\$ 25	\$ 19 1/2
Low	\$25 1/4	\$ 23 1/4	\$ 14 1/2	\$14 7/16
Close	\$27	\$ 24 7/8	\$ 14 7/8	\$ 17 1/8

* Arch Coal stock began trading publicly on July 1, 1997.

On February 19, 1999, Arch Coal's common stock closed at \$10.25 on the New York Stock Exchange. At that date, there were 817 holders of record of Arch Coal's common stock.

DIVIDENDS

In 1998, Arch Coal paid dividends totaling \$18.3 million, or \$.46 per share, on its outstanding shares of common stock. In 1997, Arch Coal paid dividends totaling \$13.6 million, or \$.445 per share, on its outstanding shares of common stock. (Arch Coal stock began trading publicly on July 1, 1997). Arch Coal expects to continue paying regular cash dividends, although there is no assurance as to the amount or payment of dividends in the future because they are dependent on Arch Coal's future earnings, capital requirements and financial condition.

LETTER OF PREDECESSOR ACCOUNTANT

To the Securities and Exchange Commission:

We have read Item 9 included in the attached Annual Report on Form 10-K for the year ended December 31, 1998 of Arch Coal, Inc. to be filed with the Securities and Exchange Commission and are in agreement with the statements contained therein.

/s/ ARTHUR ANDERSEN LLP

ARTHUR ANDERSEN LLP

St. Louis, Missouri
February 26, 1999

EXHIBIT 21

SUBSIDIARIES OF ARCH COAL, INC.

The following is a complete list of the direct and indirect subsidiaries of Arch Coal, Inc., a Delaware corporation:

NAME -----	JURISDICTION OF INCORPORATION -----
Allegheny Land Company	Delaware
Apogee Coal Company	Delaware
Arch Australia Pty Limited	New South Wales, Australia
Arch Coal International, Ltd.	Barbados
Arch Coal Sales Company, Inc.	Delaware
Arch Coal Terminal Inc.	Delaware
Arch Energy Resources, Inc.	Delaware
(1) Arch of Wyoming, LLC	Delaware
Arch Reclamation Services, Inc.	Delaware
Arch Technology Corporation	Delaware
(1) Arch Uinta, LLC	Delaware
Arch Western Acquisition Corporation	Delaware
(2) Arch Western Resources, LLC	Delaware
Ark Land Company	Delaware
Ashland Coal, Inc.	Delaware
Ashland Terminal, Inc.	Delaware
(1) AU Sub, LLC	Delaware
(2) (3) Canyon Fuel Company, LLC	Delaware
Catenary Coal Company	Delaware
Catenary Coal Holdings, Inc.	Delaware
Coal-Mac, Inc.	Kentucky
Cumberland River Coal Company	Delaware
Energy Development Co.	Iowa
Hobet Mining, Inc.	West Virginia
Julian Tipple, Inc.	Delaware
Lone Mountain Processing, Inc.	Delaware
Mingo Logan Coal Company	Delaware
(1) Mountain Coal Company, L.L.C.	Delaware
Mountain Gem Land, Inc.	West Virginia
Mountain Mining, Inc.	Delaware
Mountaineer Land Company	Delaware
P. C. Holding, Inc.	Delaware
Paint Creek Terminals, Inc.	Delaware
(1) State Leases, LLC	Delaware
(1) Thunder Basin Coal Company, L.L.C.	Delaware

(1) owned by Arch Western Resources, LLC.

(2) Arch Western Acquisition Corporation owns a 99% membership interest in Arch Western Resources, LLC; Arch Western Resources, LLC owns a 65% in Canyon Fuel Company, LLC.

(3) owned by Arch Western Resources, LLC.

CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in this Annual Report (Form 10-K) of Arch Coal, Inc. of our report dated January 22, 1999, included in the 1998 Annual Report to Stockholders of Arch Coal, Inc.

Our audits also included the financial statement schedule of Arch Coal, Inc. listed in Item 14(a) as of December 31, 1998 and 1997 and for the years then ended. This schedule is the responsibility of the Company's management. Our responsibility is to express an opinion based on our audits. The financial statement schedule as of December 31, 1996 and for the year then ended was audited by other auditors whose report dated January 16, 1997 expressed an unqualified opinion on the schedule. In our opinion, the financial statement schedule for 1998 and 1997 referred to above, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also consent to the incorporation by reference in (1) the Registration Statement (Form S-8 No. 333-30565) pertaining to the Arch Coal, Inc. 1997 Stock Incentive Plan and in the related Prospectus, (2) the Registration Statement (Form S-8 No. 333-32777) pertaining to the Arch Coal, Inc. Employee Thrift Plan and in the related Prospectus and (3) the Registration Statement (Form S-8 No. 333-68131) pertaining to the Arch Coal, Inc. Deferred Compensation Plan and in the related Prospectus, of our report dated January 22, 1999, with respect to the consolidated financial statements of Arch Coal, Inc. and subsidiaries incorporated by reference in, and of our opinion with respect to the financial statement schedule of Arch Coal, Inc. listed in Item 14(a) included in, the Annual Report (Form 10-K) for the year ended December 31, 1998, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

ERNST & YOUNG LLP

Louisville, Kentucky
February 26, 1999

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation of our report included in this Form 10-K, into previously filed Registration Statements on Form S-8 (File No. 333-30565, 333-32777, and 333-68131) pertaining to the Arch Coal, Inc. Stock Incentive Plan, the Arch Coal, Inc. Employee Thrift Plan, and the Arch Coal, Inc. Deferred Compensation Plan.

/s/ ARTHUR ANDERSEN LLP

ARTHUR ANDERSEN LLP

St. Louis, Missouri
February 26, 1999

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the incorporation by reference in the registration statements on Form S-8 (File No.'s 333-32777, 333-68131 and 333-30565) of our report dated March 20, 1998 on our audit of the financial statements of Canyon Fuel Company, LLC, as of December 31, 1997 and for the period from December 20, 1996 (inception) through December 31, 1997 which report is included in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Denver, Colorado
March 1, 1999

EXHIBIT 24

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS: That each of the undersigned directors and the undersigned Director/Officer of ARCH COAL, INC., a Delaware corporation ("Arch Coal"), hereby constitutes and appoints Steven F. Leer, Patrick A. Kriegshauser and Jeffrey N. Quinn, and each of them, his true and lawful attorneys-in-fact and agents, with full power to act without the others, to sign Arch Coal's Annual Report on Form 10-K for the year ended December 31, 1998, to be filed with the Securities and Exchange Commission under the provisions of the Securities Exchange Act of 1934, as amended; to file such Annual Report and the exhibits thereto and any and all other documents in connection therewith, including without limitation amendments thereto, with the Securities and Exchange Commission; and to do and perform any and all other acts and things requisite and necessary to be done in connection with the foregoing as fully as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

Dated: February 25, 1999

/s/ Steven F. Leer

Steven F. Leer

President and Chief Executive
Officer and Director

/s/ James R. Boyd

James R. Boyd

Chairman of the Board and Director

/s/ Paul W. Chellgren

Paul W. Chellgren

Director

/s/ Ignacio Dominguez Urquijo

Ignacio Dominguez Urquijo

Director

/s/ Thomas L. Feazell

Thomas L. Feazell

Director

/s/ John R. Hall

John R. Hall

Director

/s/ Robert L. Hintz

Robert L. Hintz

Director

/s/ Douglas H. Hunt

Douglas H. Hunt

Director

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM FORM 10-K AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

12-MOS	
	DEC-31-1998
	DEC-31-1998
	27,414
	0
	227,455
	0
	68,455
	353,334
	2,668,749
	732,005
	2,918,220
333,158	
	0
0	
	0
	397
	617,819
2,918,220	
	1,428,171
1,505,635	
	1,313,400
	1,417,788
	0
	0
61,446	
	26,401
	(5,100)
31,501	
	0
	(1,488)
	0
	30,013
	.76
	.76

CANYON FUEL COMPANY, LLC

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 1998 AND FOR THE PERIOD FROM
DECEMBER 20, 1996 (INCEPTION) THROUGH DECEMBER 31, 1997 WITH
REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Members of the Canyon Fuel Company, LLC:

We have audited the accompanying balance sheet of Canyon Fuel Company, LLC (a Delaware Limited Liability Company) (the "Company") as of December 31, 1998, and the related statements of income, members' equity and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Canyon Fuel Company, LLC at December 31, 1998, and the results of its operations and its cash flows for the year then ended, in conformity with generally accepted accounting principles.

Louisville, Kentucky
January 22, 1999

/s/ ERNST & YOUNG LLP

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Members of the Canyon Fuel Company, LLC:

We have audited the accompanying balance sheet of Canyon Fuel Company, LLC (a Delaware Limited Liability Company) (the "Company") as of December 31, 1997, and the related statements of income, members' equity and cash flows for the period from December 20, 1996 (inception) through December 31, 1997. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Canyon Fuel Company, LLC as of December 31, 1997, and the results of its operations and its cash flows for the period from December 20, 1996 (inception) through December 31, 1997, in conformity with generally accepted accounting principles.

Denver, Colorado
March 20, 1998

/s/ PRICEWATERHOUSECOOPERS, LLP

CANYON FUEL COMPANY, LLC
 STATEMENTS OF INCOME
 (in thousands of dollars)

	YEAR ENDED DECEMBER 31, 1998 AND FOR THE PERIOD FROM DECEMBER 20, 1996 (INCEPTION) THROUGH DECEMBER 31, 1997	
	1998	1997
	-----	-----
REVENUES		
Coal sales	\$275,303	\$251,818
Other revenues	905	2,018
	-----	-----
	276,208	253,836
	-----	-----
COSTS AND EXPENSES		
Cost of coal sales	250,248	210,500
Amortization of coal supply agreements	19,044	18,089
Fees to members	5,945	4,805
	-----	-----
	275,237	233,394
	-----	-----
Income from operations	971	20,442
	-----	-----
Interest, net:		
Interest expense	(205)	(294)
Interest income	1,110	1,120
	-----	-----
	905	826
	-----	-----
NET INCOME	\$ 1,876	\$ 21,268
	=====	=====

The accompanying notes are an integral part of the financial statements.

CANYON FUEL COMPANY, LLC
BALANCE SHEETS (in thousands of dollars)

	December 31	
	1998	1997
ASSETS		
Current assets	\$ 20,246	\$ 5,443
Cash and cash equivalents	33,611	23,450
Trade accounts receivable	9,358	8,496
Other receivables	23,842	32,394
Other	563	279
Total current assets	87,620	70,062
Property, plant and equipment		
Coal lands and mineral rights	263,576	259,111
Plant and equipment	199,631	165,768
Deferred mine development	9,350	5,493
	472,557	430,372
Less accumulated depreciation, depletion and amortization	(77,764)	(34,094)
Property, plant and equipment, net	394,793	396,278
Other assets		
Prepaid royalties	24,829	27,533
Coal supply agreements	112,347	131,391
Other	150	150
Total other assets	137,326	159,074
Total assets	\$ 619,739	\$ 625,414
LIABILITIES AND MEMBERS' EQUITY		
Current liabilities		
Accounts payable	\$ 22,653	\$ 16,842
Accrued expenses	8,806	14,592
Total current liabilities	31,459	31,434
Accrued postretirement benefits other than pension	6,902	5,439
Accrued reclamation and mine closure	2,793	2,387
Accrued workers' compensation	7,037	4,769
Accrued pension cost	1,461	807
Other noncurrent liabilities	1,054	2,552
Total liabilities	50,706	47,388
Members' equity	569,033	578,026
Total liabilities and members' equity	\$ 619,739	\$ 625,414

The accompanying notes are an integral part of the financial statements.

CANYON FUEL COMPANY, LLC
 STATEMENTS OF MEMBERS' EQUITY
 (in thousands of dollars)

YEAR ENDED DECEMBER 31, 1998 AND FOR THE PERIOD FROM
 DECEMBER 20, 1996 (INCEPTION) THROUGH DECEMBER 31, 1997

	ARCO UINTA COAL COMPANY THROUGH JUNE 1, 1998, ARCH WESTERN RESOURCES, LLC THEREAFTER -----	ITOCHU COAL INTERNATIONAL INC. -----	TOTAL -----
Contributions	\$410,643	\$221,115	\$631,758
Distributions	(48,750)	(26,250)	(75,000)
Net income for the period from December 20, 1996 (inception) through December 31, 1997	13,824 -----	7,444 -----	21,268 -----
Members' equity, December 31, 1997	375,717	202,309	578,026
Contributions	11,785	6,346	18,131
Distributions	(18,850)	(10,150)	(29,000)
Net income	1,219 -----	657 -----	1,876 -----
Members' equity, December 31, 1998	\$369,871 =====	\$199,162 =====	\$569,033 =====

The accompanying notes are an integral part of the financial statements.

CANYON FUEL COMPANY, LLC
 STATEMENTS OF CASH FLOWS
 (in thousands of dollars)

	YEAR ENDED DECEMBER 31, 1998 AND FOR THE PERIOD FROM DECEMBER 20, 1996 (INCEPTION) THROUGH DECEMBER 31, 1997	
	1998	1997
	-----	-----
OPERATING ACTIVITIES		
Net income	\$ 1,876	\$ 21,268
Adjustments to reconcile to cash provided by operating activities:		
Depreciation, depletion and amortization	63,768	52,183
Prepaid royalties	2,704	2,954
Net (gain) loss on disposition of assets	260	(611)
Changes in operating assets and liabilities	1,691	8,716
Other	285	(3,205)
	-----	-----
Cash provided by operating activities	70,584	81,305
	-----	-----
INVESTING ACTIVITIES		
Acquisition of coal operations, net of cash acquired	--	(610,334)
Additions of property, plant and equipment	(43,499)	(20,819)
	-----	-----
Cash used in investing activities	(43,499)	(631,153)
	-----	-----
FINANCING ACTIVITIES		
Members' contributions	18,131	631,758
Members' distributions	(29,000)	(75,000)
Federal lease payments	(1,413)	(1,467)
	-----	-----
Cash provided by (used) in financing activities	(12,282)	555,291
	-----	-----
Increase in cash and cash equivalents	14,803	5,443
Cash and cash equivalents, beginning of period	5,443	--
	-----	-----
Cash and cash equivalents, end of period	\$ 20,246	\$ 5,443
	=====	=====
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid during the year for interest	\$ 241	\$ 184

The accompanying notes are an integral part of the financial statements.

NOTES TO FINANCIAL STATEMENTS
CANYON FUEL COMPANY, LLC (in thousands of dollars)

1. FORMATION OF THE COMPANY

Effective December 20, 1996, Canyon Fuel Company, LLC (the "Company") was formed as a joint venture between ARCO Uinta Coal Company ("ARCO") (65% ownership) and ITOCHU Coal International Inc. (35% ownership) for the purpose of acquiring certain Utah coal operations and an approximate 9% interest in Los Angeles Export Terminal, Inc. ("LAXT") from Coastal Coal, Inc. and The Coastal Corporation (collectively, "Coastal"). Effective June 1, 1998, ARCO Uinta Coal Company's ownership of the Company was acquired by Arch Western Resources, LLC ("Arch Western"). The owners of the Company are referred to herein as the "Members".

The Company operates one reportable segment: the production of steam coal from deep mines in Utah for sale primarily to utility companies primarily in the United States. Net profits and losses are allocated to the Members based on their respective ownership percentage. Distributions of the Company's earnings are also allocated to the Members based on their respective ownership percentage.

On December 20, 1996, the Company acquired the western operations of Coastal for approximately \$631.8 million in cash, plus assumed liabilities, for a total purchase price of approximately \$669.6 million (the "Acquisition"). These operations primarily consist of three coal mines in central Utah. The Acquisition was funded through cash contributions by the Members in proportion to their respective ownership percentage. The Acquisition has been accounted for using the purchase method of accounting.

In the allocation of the purchase price, approximately \$77.8 million was allocated to access rights associated with reserves located on properties which are adjacent to the properties acquired. In the event the Company is not successful in acquiring the reserves located adjacent to the properties acquired, the amount of the purchase price allocated to such reserves will be written off in the period such determination is made.

2. ACCOUNTING POLICIES

ACCOUNTING ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents are stated at cost which approximates fair value. Cash equivalents consist of highly liquid investments with an original maturity of three months or less when purchased.

INVENTORIES

Inventories consist of the following:

	DECEMBER 31	
	1998	1997
Coal	\$ 11,892	\$ 20,491
Supplies	11,950	11,903
	\$ 23,842	\$ 32,394

Coal inventory is valued using the first-in-first-out ("FIFO") cost method and is stated at the lower of cost or market. Coal inventory costs include labor, equipment costs and operating overhead. Supplies are valued using the average cost method and are stated at the lower of cost or market.

COAL ACQUISITION COSTS AND PREPAID ROYALTIES

Coal lease rights obtained through acquisition are capitalized and amortized primarily by the units-of-production method over the estimated recoverable reserves. Rights to leased coal lands are often acquired through royalty payments. Where royalty payments represent prepayments recoupable against production, they are capitalized. As mining occurs on these leases, the prepayment is offset against earned royalties and is included in the cost of coal sales.

COAL SUPPLY AGREEMENTS

Acquisition costs related to coal supply agreements (sales contracts) are capitalized and amortized on the basis of coal to be shipped over the term of the contract. Accumulated amortization for sales contracts was \$37.1 million and \$18.1 million at December 31, 1998 and 1997, respectively.

EXPLORATION COSTS

Costs related to locating coal deposits and determining the economic mineability of such deposits are expensed as incurred.

PROPERTY, PLANT AND EQUIPMENT

Additions to property, plant and equipment are recorded at cost. Maintenance and repair costs are expensed as incurred. Mine development costs are capitalized and amortized on the units-of-production method. Depletion of mineral properties is computed on the units-of-production method based on estimated recoverable coal reserves.

Depreciation and amortization of other property, plant and equipment is computed by either the straight-line method over the expected lives of the assets, which range from 3 to 16 years, or on the units-of-production method, depending upon the type of asset. Fully depreciated assets are retained in property and depreciation accounts until they are removed from service. Upon disposal of depreciated assets, residual cost less salvage value is included in the determination of current income.

ASSET IMPAIRMENT

If facts and circumstances suggest that a long-lived asset may be impaired, the carrying value is reviewed. If this review indicates that the value of the asset will not be recoverable, as determined based on projected undiscounted cash flows related to the asset over its remaining life, then the carrying value of the asset is reduced to its estimated fair value.

RECLAMATION AND MINE CLOSING COSTS

The Company charges current reclamation costs to expense as incurred. Final reclamation costs, including dismantling and restoration, are estimated based upon current federal and state regulatory requirements and are accrued during operations. The final reclamation provision was calculated using the units-of-production method on the basis of estimated costs as of the balance sheet date. The effect of changes in estimated costs and production is recognized on a prospective basis.

The Company is not aware of any events of noncompliance with environmental laws and regulations. The exact nature of environmental issues and costs, if any, which the Company may encounter in the future cannot be predicted, primarily because of the changing character of environmental requirements that may be enacted by governmental agencies.

REVENUE RECOGNITION

Coal sales revenues include sales to customers of coal produced at Company operations and purchased from other companies. The Company recognizes revenue from coal sales at the time title passes to the customer. Revenues from sources other than coal sales, including gains and losses from dispositions of long-term assets, are included in other revenues and are recognized as services are performed or otherwise earned.

INCOME TAXES

The financial statements do not include a provision for income taxes as the Company is treated as a partnership for income tax purposes and does not incur federal or state income taxes. Instead, its earnings and losses are included in the Members' separate income tax returns.

RECLASSIFICATIONS

Certain amounts in the 1997 financial statements have been reclassified to conform with the classifications in the 1998 financial statements with no effect on previously reported net income or members' equity.

3. ACCRUED EXPENSES

Accrued expenses consist of the following:

	DECEMBER 31	
	1998	1997
	-----	-----
Accrued payroll and related benefits	\$ 3,729	\$ 10,250
Accrued taxes other than income taxes	955	699
Accrued workers' compensation	1,100	--
Other accrued expenses	3,022	3,643
	-----	-----
	\$ 8,806	\$ 14,592
	=====	=====

4. FEDERAL LEASE PAYMENTS

The Company has been awarded federal leases which require the bid price to be paid over a number of years. Royalty payments will be required when mining begins on the leases. The liability for federal lease payments consists of the following:

	DECEMBER 31	
	1998	1997
	-----	-----
Alkai Creek lease payable; due in annual installments of \$533 through October 1, 1999, with imputed interest at 5.67%	\$ 505	\$ 983
Winter Quarters lease payable; due in annual installments of \$1,120 through June 20, 2000, with imputed interest at 6.21%	2,047	2,982
	-----	-----
	2,552	3,965
Less current portion	(1,498)	(1,413)
	-----	-----
	\$ 1,054	\$ 2,552
	=====	=====

Annual maturities for federal lease payments as of December 31, 1998 are as follows:

1999	\$ 1,498
2000	1,054

	\$ 2,552
	=====

Interest expense recorded under federal leases was \$205 for 1998 and \$294 in 1997.

5. EMPLOYEE BENEFIT PLANS

Defined Benefit Pension and Other Postretirement Benefit Plans

Essentially all of the Company's employees are covered by a defined benefit pension plan sponsored by the Company. The benefits are based on years of service and the employee's compensation, primarily during the last five years of service. The funding policy for the pension plan is to make annual contributions as required by applicable regulations.

The Company also provides certain postretirement medical and life insurance benefits to substantially all employees who retire with the Company. The Company has the right to modify the plans at any time. The Company's current policy is to fund the cost of postretirement health care and life insurance benefits as they are paid.

Summaries of the changes in the benefit obligations and plan assets (primarily listed stocks and debt securities) and of the funded status of the plans follow:

	Pension benefits		Other postretirement benefits	
	1998	1997	1998	1997
CHANGE IN BENEFIT OBLIGATIONS				
Benefit obligations at January 1, 1998				
and December 20, 1996 (inception)	\$ 2,465	\$ 792	\$ 5,703	\$ 4,787
Service cost	1,674	1,451	463	313
Interest cost	353	58	612	347
Benefits paid	(38)	(53)	--	(9)
Plan amendments	--	--	1,332	--
Other-primarily actuarial loss	981	217	1,383	265
Benefit obligations at December 31	\$ 5,435	\$ 2,465	\$ 9,493	\$ 5,703
CHANGE IN PLAN ASSETS				
Value of plan assets at January 1, 1998				
and December 20, 1996 (inception)	\$ 54	\$ --	\$ --	\$ --
Actual return on plan assets	(106)	(13)	--	--
Employer contributions	1,395	--	--	9
Acquisitions	--	120	--	--
Benefits paid	(38)	(53)	--	(9)
Value of plan assets at December 31	\$ 1,305	\$ 54	\$ --	\$ --
FUNDED STATUS OF THE PLANS				
Accumulated obligations less plan assets	\$ 4,130	\$ 2,411	\$ 9,493	\$ 5,703
Unrecognized actuarial loss	(1,165)	(209)	(1,396)	(264)
Unrecognized prior service cost	--	--	(1,195)	--
Net liability recognized	\$ 2,965	\$ 2,202	\$ 6,902	\$ 5,439
BALANCE SHEET LIABILITIES				
Current portion of liability	\$ 1,504	\$ 1,395	\$ --	\$ --
Long term portion of liability	1,461	807	6,902	5,439
Total accrued benefit liabilities	\$ 2,965	\$ 2,202	\$ 6,902	\$ 5,439

	Pension benefits		Other postretirement benefits	
	1998	1997	1998	1997
WEIGHTED AVERAGE ASSUMPTIONS AS OF DECEMBER 31				
Discount rate	7.00%	7.00%	7.00%	7.00%
Rate of compensation increase	4.75%	5.00%	4.75%	5.00%
Expected return on plan assets	9.00%	10.50%	N/A	N/A
Health care cost trend on covered charges	N/A	N/A	4.5%	7.0% in 1998 to 5.0% thereafter

The following table details the components of pension and other postretirement benefit costs.

	Pension benefits		Other postretirement benefits	
	1998	1997	1998	1997
Service cost	\$ 1,674	\$ 1,451	\$ 463	\$ 313
Interest cost	353	58	612	347
Expected return on plan assets	(42)	--	--	--
Other amortization and deferral	194	--	383	--
	\$ 2,179	\$ 1,509	\$ 1,458	\$ 660

The health care cost trend rate assumption has a significant effect on the amounts reported. For example, increasing the assumed health care cost trend rate by one percentage point each year would increase the accumulated postretirement obligation as of December 31, 1998 by \$241, or 2.5%, and the net periodic postretirement benefit cost for 1998 by \$33, or 2.3%.

Other Plans

The Company sponsors a savings plan which was established to assist eligible employees in providing for their future retirement needs. The plan is non-contributory by the Company.

6. ACCRUED BLACK LUNG COMPENSATION

The Company is liable under the federal Mine Safety and Health Act of 1977, as amended, to provide for pneumoconiosis (black lung) benefits to eligible employees, former employees, and dependents with respect to claims filed by such persons on or after July 1, 1973. The Company is also liable under various states' statutes for black lung benefits. The Company currently provides for federal and state claims principally through a self-insurance program. Charges are being made to operations as determined by independent actuaries, at the present value of the actuarially computed present and future liabilities for such benefits over the employees' applicable years of service. Black Lung compensation costs include the following components:

	1998 -----	1997 -----
Self-insured black lung benefits:		
Service cost	\$ 228	\$ 272
Interest cost	244	210
	-----	-----
	\$ 472	\$ 482
	=====	=====

The actuarial assumptions used in the determination of black lung benefits included a discount rate of 7.0% as of December 31, 1998 (7.25% as of December 31, 1997) and a black lung benefit cost escalation rate of 4% in 1998 and 1997.

Summarized below is information about the amounts recognized in the balance sheets for black lung compensation benefits:

	DECEMBER 31	
	1998 -----	1997 -----
Actuarial present value for self-insured black lung benefits:		
Accumulated blank lung benefit obligation	\$7,265	\$5,892
Unrecognized net loss	(228)	(1,123)
	-----	-----
	\$7,037	\$4,769
	=====	=====

7. CONCENTRATION OF CREDIT RISK AND MAJOR CUSTOMERS

The Company places its cash equivalents in investment-grade short-term investments and limits the amount of credit exposure to any one commercial issuer.

The Company markets its coal principally to electric utilities in the United States. Generally, credit is extended based on an evaluation of the customer's financial condition, and collateral is not generally required. Credit losses are provided for in the financial statements and historically have been minimal.

The Company is committed under long-term contracts to supply coal that meets certain quality requirements at specified prices. These prices are generally adjusted based on indices. Quantities sold under some of these contracts may vary from year to year within certain limits at the option of the customer. The Intermountain Power Agency accounted for approximately 29% and 34% of coal sales in 1998 and 1997, respectively. This same customer accounted for 34% and 35% of accounts receivable at December 31, 1998 and 1997, respectively. Sierra Pacific accounted for approximately 11% and 10% of coal sales in 1998 and 1997, respectively. Approximately 8% and 15% of coal sales in 1998 and 1997, respectively, were to ITOCHU Coal International Inc.

8. RELATED PARTY TRANSACTIONS

As described in Note 1, 65% of the Company was owned by ARCO and subsequent to June 1, 1998 is owned by Arch Western. ARCO and now Arch Western act as the Company's managing member. The Company pays administration and production fees to ARCO and now Arch Western for managing the Canyon Fuel operations. These fees were \$5.9 million and \$4.8 million in 1998 and 1997, respectively. The Company has a payable balance to Arch Western and ARCO of \$2.8 million and \$7.9 million at December 31, 1998 and 1997, respectively.

9. COMMITMENTS AND CONTINGENCIES

The Company is in litigation with the Skyline Partners, lessors of the coal reserves which comprise the Company's Skyline Mine. The coal leases in question were entered into between The Coastal Coal Corporation, the Company's predecessor in interest, and the Skyline Partners' predecessor. The coal leases require the lessee, the Company, to pay an annual advance minimum royalty of \$5 million, which is fully recoupable against a production royalty that is to be paid by the Company on each ton of coal mined and sold from the leaseholds. In 1997, the Company concluded that the number of recoverable tons which remain on the leasehold were insufficient to allow it to fully recoup the total amount of advance royalties that have been paid to the Skyline Partners, and filed suit in Utah State Court against the Skyline Partners alleging that the Company is not required to make the final minimum advance royalty payment of \$5 million and seeking to recover \$2.1 million in advance minimum royalties paid to the Skyline Partners that the Company will not be able to recoup based upon the estimated number of recoverable tons under the leases. In November 1997, the Skyline Partners filed a companion case in federal district court in Colorado, seeking to compel the Company to pay the last \$5 million advance minimum royalty payment, and alleging a default under the leases. To date, these cases have principally involved procedural disputes concerning proper venue for the case.

The Company is also the subject of or party to a number of other pending or threatened legal actions. On the basis of management's best assessment of the likely outcome of these actions, expenses or judgments arising from any of these suits, or from any of the proceedings described above, are not expected to have a material adverse effect on the Company's operations, financial position, or cash flows.

Included in property, plant and equipment of the Company is an approximate 9% investment in LAXT recorded at cost amounting to \$12.3 million and \$12 million as of December 31, 1998 and 1997, respectively. LAXT is experiencing operating losses and has negative cash flow principally due to weak demand for U.S. coal exports to the Far East. The ability of LAXT to continue as a going concern is dependent on their improving operating results and obtaining additional financing, if necessary. If these issues are not satisfactorily resolved in a timely manner, there can be no assurance that the Company's investment in LAXT will be recoverable.

10. CASH FLOW

The changes in operating assets and liabilities as shown in the statements of cash flows are comprised of the following:

	1998	1997
	-----	-----
Decrease (increase) in operating assets:		
Receivables	\$(11,023)	\$ 1,802
Inventories	8,552	(6,021)
Increase in operating liabilities:		
Accounts payable and accrued expenses	25	10,046
Accrued postretirement benefits other than pension	1,463	2,160
Accrued reclamation and mine closure	406	332
Accrued workers' compensation	2,268	397
Changes in operating assets and liabilities	\$ 1,691	\$ 8,716
	=====	=====

11. ACCOUNTING DEVELOPMENT

In June 1998, the Financial Accounting Standards Board issued FAS 133, Accounting for Derivative Instruments and Hedging Activities, which is required to be adopted in years beginning after June 15, 1999. FAS 133 permits early adoption as of the beginning of any fiscal quarter after its issuance. FAS 133 will require the Company to recognize all derivatives on the balance sheet at fair value. Derivatives that are not hedges must be adjusted to fair value through income. If the derivative is a hedge, depending on the nature of the hedge, changes in the fair value of the

derivative will either be offset against the change in fair value of the hedged assets or liabilities through earnings or recognized in other comprehensive income until the hedged item is recognized in earnings. The ineffective portion of a derivative's change in fair value will be immediately recognized in earnings. The Company has not yet determined what effect FAS 133 will have on the earnings and financial position of the Company.

12. YEAR 2000 (UNAUDITED)

The Company has conducted a review of its computer systems to identify areas that could be affected by the Year 2000 computer issue. The Company is in the process of upgrading the accounting systems and the truck scale systems. Testing will be conducted in April 1999 and the project should be completed during the second quarter of 1999. Although there can be no guarantees, the Company, to the best of its ability, has determined that other operations systems are Year 2000 compliant. Other support systems are provided by Arch Coal and are either Year 2000 compliant or will be later in 1999.

13. SUBSEQUENT EVENT

On January 20, 1999, the Company amended its coal supply agreements pursuant to which it supplied coal to the Intermountain Power Agency's Intermountain Power Project ("IPA"). Pursuant to the amended coal supply agreements, the Company will supply coal to IPA through 2010 with a mutual option to extend to 2015 at a rate of approximately 2.2 million tons per year. The Company and IPA settled a pending arbitration and related litigation resulting from IPA's assertion of a gross inequity under the coal supply contracts and disagreements over the price escalation provisions of the contracts. As part of the settlement, IPA agreed to pay to the Company \$12.7 million which had been withheld due to the dispute. The Members of the Company, Arch Coal, Inc. and ITOCHU Coal International Inc., also agreed to terminate certain indemnification rights, including indemnification rights relating to the IPA coal supply agreements, arising under the December, 1996 acquisition of the Company from The Coastal Corporation. Also, Arch Coal, Inc. agreed to terminate certain indemnification rights relating to the IPA coal supply agreements arising under its June 1, 1998 acquisition of Atlantic Richfield Company's domestic coal operations. In the aggregate, the Company and its Members will receive \$54.9 million over three years for termination of the indemnify rights and to settle existing receivable balances. Except for payments received to settle existing trade receivables, the Company will apply the other proceeds against the existing IPA coal supply contract value included in the Company's balance sheet.

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To Arch Coal, Inc.:

We have audited the accompanying consolidated statements of income, stockholders' equity and cash flows for the year ended December 31, 1996. These financial statements and the schedule referred to below are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the results of operations and cash flows of Arch Coal, Inc. and subsidiaries for the year ended December 31, 1996, in conformity with generally accepted accounting principles.

Our audit was made for the purpose of forming an opinion on the basic financial statements taken as a whole. The schedule listed in the index of financial statements at Item 14(a) is presented for purposes of complying with the Securities and Exchange Commission's rules and is not part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, fairly states in all material respects the financial data required to be set forth therein in relation to the basic financial statements taken as a whole.

ARTHUR ANDERSEN LLP

St. Louis, Missouri
January 16, 1997 (except with
respect to the matter discussed in Note 11
as to which the date is April 4, 1997)

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Members of the Canyon Fuel Company, LLC:

We have audited the accompanying balance sheet of Canyon Fuel Company, LLC (a Delaware Limited Liability Company) (the "Company") as of December 31, 1997, and the related statements of income, members' equity and cash flows for the period from December 20, 1996 (inception) through December 31, 1997. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Canyon Fuel Company, LLC as of December 31, 1997, and the results of its operations and its cash flows for the period from December 20, 1996 (inception) through December 31, 1997, in conformity with generally accepted accounting principles.

/s/ PricewaterhouseCoopers, LLP

Denver, Colorado
March 20, 1998