

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 11-K

(X) ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2003

OR

() TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Commission File Number 1-13105

Title of the Plan -

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Name and Address of the issuer of the Securities
Held Pursuant to the Plan -

Arch Coal, Inc.
One City Place Drive, Suite 300
St. Louis, Missouri 63141

FINANCIAL STATEMENTS AND EXHIBITS

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Statement of Changes in Net Assets Available for Benefits
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FINANCIAL STATEMENTS
DECEMBER 31, 2003 AND 2002

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Report of Independent Registered Public Accounting Firm

To the Pension Committee
Arch Coal, Inc. Employee Thrift Plan

We have audited the accompanying statement of net assets available for benefits of the Arch Coal, Inc. Employee Thrift Plan as of December 31, 2003 and 2002 and the related statement of changes in net assets available for benefits for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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 financial statements referred to above present fairly, in all material respects, the net assets available for benefits at December 31, 2003 and 2002, and the changes in net assets available for benefits for the years then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ Rubin, Brown, Gornstein & Co. LLP

St. Louis, Missouri
May 26, 2004

ARCH COAL, INC. EMPLOYEE THRIFT PLAN
STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS

	December 31,	
	2003	2002
Assets		
Investments, At Fair Value (Note 3)		
Money market	\$ 1,985,664	\$ 1,564,190
Mutual funds and common/collective fund	142,291,793	106,587,507
Guaranteed investment account	59,292,820	55,380,598
Company stock	15,679,214	15,495,457
Participant loans (Note 4)	10,618,988	9,618,429
Brokerage securities	12,041,905	7,787,352
Total Investments	241,910,384	196,433,533
Receivables		
Employee contributions	513,678	—
Employer contributions	371,371	—
Total Receivables	885,049	—
Net Assets Available For Benefits	\$242,795,433	\$196,433,533

See the accompanying notes to financial statements.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

STATEMENT OF CHANGES IN NET ASSETS
AVAILABLE FOR BENEFITS
For The Year Ended December 31, 2003

	For The Years Ended December 31,	
	2003	2002
Additions To Net Assets Attributed To:		
Investment Income (Loss) (Note 3)		
Dividends and interest	\$ 5,040,693	\$ 5,314,719
Net appreciation (depreciation) in fair value of investments	33,730,404	(26,599,478)
Net Investment Income (Loss)	38,771,097	(21,284,759)
Contributions		
Salary deferral contributions	12,578,170	13,252,073
Employer contribution	9,835,130	10,224,095
Employee after-tax contribution	1,107,542	1,301,353
Rollover contribution	248,317	417,482
Total Contributions	23,769,159	25,195,003
Total Additions	62,540,256	3,910,244
Deductions From Net Assets Attributed To:		
Benefits paid directly to participants	16,178,356	14,495,575
Net Increase (Decrease)	46,361,900	(10,585,331)
Net Assets Available For Benefits - Beginning Of Year	196,433,533	207,018,864
Net Assets Available For Benefits - End Of Year	\$242,795,433	\$196,433,533

See the accompanying notes to financial statements.

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ARCH COAL, INC. EMPLOYEE THRIFT PLAN

NOTES TO FINANCIAL STATEMENTS

December 31, 2003 And 2002

1. Description Of The Plan

The Arch Coal, Inc. Employee Thrift Plan was established by Arch Coal, Inc. ("Company") for the benefit of the eligible employees of the Company, its subsidiaries and controlled affiliates.

The following description of the Plan provides only general information. Participants should refer to the Summary Plan Description for a more complete description of the Plan's provisions.

Certain provisions of the Plan as described below do not apply to or have been modified for certain subsidiaries and affiliates of the Company.

General

The Plan, which has been adopted by Arch Coal, Inc. is a defined contribution profit sharing plan which includes a 401(k) provision. The Plan covers all full-time salaried employees, all full-time nonunion hourly employees, and certain union employees where specified by applicable collective bargaining agreements of the Company, its subsidiaries, and any controlled affiliates that elect to participate in the Plan. It is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

Contributions

Participants may elect to defer between 1 percent and 50 percent of compensation. Highly compensated employees may contribute up to 16%, with the exception of those employed at Mingo Logan who may contribute 17%. The percentage of employer match or nondiscretionary contribution depends upon the location.

Participant Accounts

Each participant's account is credited with the participant's contributions, the employer's matching contribution, if applicable, or employer non-discretionary contribution, if applicable, and an allocation of Plan earnings. The allocation of earnings is determined by the earnings of the participant's investment selection based on each participant's account balance, as defined in the Plan agreement. The benefit to which a participant is entitled is the benefit that can be provided from the participant's account.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Notes To Financial Statements (*Continued*)

Vesting

Participants are fully vested in their contributions plus actual earnings. All eligible employees of the Company at December 31, 1997 became fully vested in the Plan. Eligible employees hired subsequent to December 31, 1997 vest in Company contributions and earnings upon the completion of three full and consecutive years of service.

All participants become fully vested upon death while employed, total disability, or normal retirement age, regardless of the number of months of participation.

Participant Loans

Active participants, with some exceptions, may borrow from their fund accounts a minimum of \$500 or up to a maximum equal to the lesser of \$50,000 or 50 percent of their vested account balances. Loan terms range from one to five years or longer for the purchase of a primary residence. The loans are secured by the balance in the participant's account and bear interest at the prime rate listed in the Wall Street Journal on the first day of the month the loan is processed. Principal and interest is paid ratably through payroll deductions.

Payment Of Benefits

Upon death, termination of service, or attainment of age 70-1/2, a participant may elect to receive either a lump-sum amount equal to the value of the participant's vested interest in his or her account, a single annuity, a joint and survivorship annuity with various survivor options or a series of installment payments.

Forfeited Accounts

Forfeited amounts of employer contributions are used to offset future Company matching contributions of the Plan. At December 31, 2003 and 2002, forfeited amounts available to reduce future Company contributions were \$32,660 and \$273,997, respectively.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Notes To Financial Statements (*Continued*)

2. Summary Of Significant Accounting Policies

Estimates And Assumptions

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, 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.

Basis Of Accounting

The financial statements of the Plan are prepared under the accrual method of accounting.

Investment Valuation And Income Recognition

Investments in mutual funds are valued at reported net asset value at December 31 as determined by the fund manager.

Investment income is recorded as earned on the accrual basis.

Payment Of Benefits

Benefits are recorded when paid.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Notes To Financial Statements (Continued)

3. Investments

The Company has established a Pension Committee to oversee the activities of the Plan and has appointed the Vice President – Human Resources as the Plan Administrator. Fleet Bank is the trustee for the Plan and Putnam Fiduciary Trust Company is the Plan recordkeeper.

Investments at fair value as of December 31, 2003 and 2002 consist of the following:

	December 31,	
	2003	2002
Putnam Money Market Fund	\$ 1,985,664	\$ 1,564,190
Mutual Funds And Common Collective Fund		
American Century Income and Growth Fund	31,939,049*	23,606,930*
Barclay's Lifepath 2010	1,231,653	599,395
Barclay's Lifepath 2020	659,003	554,161
Barclay's Lifepath 2030	460,762	223,176
Barclay's Lifepath 2040	513,702	238,111
Dodge & Cox Balanced Fund	17,197,822*	12,219,588*
Franklin Templeton Balance Sheet Fund	14,344,200*	10,406,097*
Investment Company of America	807,633	67,188
PIMCO Total Return Fund	14,780,880*	13,867,234*
Putnam Asset Allocation: Balanced Fund	623,708	63,475
Putnam Growth Opportunities Fund	18,255,101*	14,182,019*
Putnam International Equity Fund	10,363,034*	7,833,417
Putnam OTC Emerging Growth Fund	2,642,801	1,304,682
Putnam S&P 500 Index	20,739,632*	16,023,021*
Putnam Vista Fund	7,732,813	5,399,013
Total Mutual Funds And Common/Collective Fund	142,291,793	106,587,507
Arch Coal, Inc. Common Stock	15,679,214*	15,495,457*
Putnam Direct Personal Choice Retirement Account	12,041,905	7,787,352
Invesco Stable Value Fund	59,292,820*	55,380,598*
Participant Loans	10,618,988*	9,618,429
	\$241,910,384	\$196,433,533

*Investment represents 5 percent or more of net assets at the beginning of the respective Plan year.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Notes To Financial Statements (Continued)

Changes In Net Assets Available For Benefits:

	For The Year Ended December 31,	
	2003	2002
Investment Income (Loss):		
Dividends and interest	\$ 5,040,693	\$ 5,314,719
Net appreciation (depreciation) in fair value of investments	33,730,404	(26,599,478)
Net Investment Income (Loss)	<u>\$38,771,097</u>	<u>\$(21,284,759)</u>

Interest income on the Invesco Stable Value Fund is calculated and credited daily based on the aggregate contract yield of the underlying investments. The investment contracts included in this fund had an average yield of 4.32% and 4.51% for the years ended December 31, 2003 and 2002, respectively. The average crediting interest rate was 4.58% and 5.52% at December 31, 2003 and 2002, respectively. The fair value of the investment contract was \$59,292,820 and \$55,380,598 at December 31, 2003 and 2002, respectively.

4. Participants Loans

Notes receivable are secured by participants' vested balances. The notes are due in bi-weekly payments including principal and interest at varying rates reflective of the prime rate as of the time of issue. The final installments are due at various dates.

5. Plan Termination

Although it has not expressed intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan, subject to the provisions of ERISA. In the event of Plan termination, participants will become 100% vested in their accounts.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Notes To Financial Statements (*Continued*)

6. Tax Status

The Plan obtained its latest determination letter on September 26, 2002 in which the Internal Revenue Service stated that the Plan, as then designed, was in compliance with the applicable requirements of the Internal Revenue Code. The Plan has been amended since receiving the determination letter. The Plan Administrator and the Plan's tax counsel believe the Plan is correctly designed and operated with the applicable requirements of the Internal Revenue Code. Therefore, the Plan Administrator believes the Plan was qualified and the related trust tax exempt.

Report of Independent Registered Public Accounting Firm On Supplementary Information

Our audits were performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of assets held at end of year is presented for purposes of additional analysis and is not a required part of the basic financial statements, but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Income Security Act of 1974. This supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ Rubin, Brown, Gornstein & Co. LLP

St. Louis, Missouri
May 26, 2004

**ARCH COAL, INC. EMPLOYEE THRIFT PLAN
E.I.N. 43-0921172 PLAN 006**

**SCHEDULE OF ASSETS HELD AT END OF YEAR
December 31, 2003**

Identity Of Issuer	Description Of Investment	Current Value
Money Market		
Putnam Investments	Putnam Money Market Fund	\$ 1,985,664
Mutual Funds And Common/ Collective Fund		
American Century	American Century Income and Growth Fund	31,939,049
American Fund Corporation	Investment Company of America	807,633
Barclay Global Investors	Barclay's Lifepath 2010	1,231,653
Barclay Global Investors	Barclay's Lifepath 2020	659,003
Barclay Global Investors	Barclay's Lifepath 2030	460,762
Barclay Global Investors	Barclay's Lifepath 2040	513,702
Dodge & Cox Funds	Dodge & Cox Balanced Fund	17,197,822
Franklin Investments	Franklin Templeton Balance Sheet Fund	14,344,200
PIMCO Investments	PIMCO Total Return Fund	14,780,880
Putnam Investments	Putnam Asset Allocation: Balanced Fund	623,708
Putnam Investments	Putnam Growth Opportunities Fund	18,255,101
Putnam Investments	Putnam OTC Emerging Growth Fund	2,642,801
Putnam Investments	Putnam International Equity Fund	10,363,034
Putnam Investments	Putnam S&P 500 Index	20,739,632
Putnam Investments	Putnam Vista Fund	7,732,813
Total Mutual Funds And Common/Collective Fund		<u>142,291,793</u>
Common Stock		
Arch Coal, Inc. *	Common stock	<u>15,679,214</u>
Participant Directed Brokerage Accounts		
Putnam	Putnam Direct Personal Choice Retirement Account (Participants Directed Brokerage Accounts)	<u>12,041,905</u>
Balance Carried Forward		<u>171,998,576</u>

* Represents party-in-interest

The above information is a required disclosure for IRS Form 5500, Schedule H, Part IV, line 4i.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN
E.I.N. 43-0921172 PLAN 006
SCHEDULE OF ASSETS HELD AT END OF YEAR

December 31, 2003

Identity Of Issuer	Description Of Investment	Current Value
Balance Brought Forward		<u>\$171,998,576</u>
Guaranteed Investment Account -		
 Invesco Stable Value Fund		
Bank of America NT & SA	01-257	9,832,625
Bank of America NT & SA Wrapper	01-257	(442,130)
ING Life & Annuity	60034	7,034,964
ING Life & Annuity Wrapper	60034	(268,247)
JP Morgan Chase Bank	433119-MGC	10,675,032
JP Morgan Chase Bank Wrapper	433119-MGC	(339,423)
John Hancock Mutual Life Insurance Co.	9601-GAC	2,364,402
John Hancock Mutual Life Insurance Co. Wrapper	9601-GAC	(143,570)
Mellon Bank STIF Account	6070002	2,374,110
Monumental Life Insurance Co.	MDA-00589TR	8,780,545
Monumental Life Insurance Co. Wrapper	MDA-00589TR	(43,864)
State Street Bank & Trust Co.	103077	10,384,537
State Street Bank & Trust Co. Wrapper	103077	(341,256)
Union Bank of Switzerland	5043	1,648,429
Union Bank of Switzerland	5155	7,776,666
 Total Guaranteed Investment Account		<u>59,292,820</u>
Participant Loans – bearing interest at 4.0% – 9.5% due at various dates through June 2013.		<u>10,618,988</u>
		<u>\$241,910,384</u>

SIGNATURE PAGE

Pursuant to the requirements of the Securities Exchange Act of 1934, the duly authorized Plan Administrator has executed this annual report.

ARCH COAL, INC. EMPLOYEE THRIFT PLAN

Date: June 25, 2004

By: /s/ Sheila Feldman

Sheila Feldman

Plan Administrator

INDEX TO EXHIBIT

Exhibit 23 Consent of Rubin, Brown, Gornstein & Co. LLP, Independent Registered Public Accounting Firm

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-32777) pertaining to the Arch Coal, Inc. Employee Thrift Plan of our report dated May 26, 2004, with respect to the financial statements and supplemental schedule of Arch Coal, Inc. Employee Thrift Plan included in this Annual Report on Form 11-K for the years ended December 31, 2003 and 2002.

/S/ Rubin, Brown, Gornstein & Co. LLP

Rubin, Brown, Gornstein & Co. LLP

St. Louis, Missouri
June 25, 2004