

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**FORM S-8****REGISTRATION STATEMENT**
Under the
SECURITIES ACT OF 1933**ARCH COAL, INC.**

(Exact name of registrant as specified in its charter)

DELAWARE
(State or Other Jurisdiction of
Incorporation or Organization)43-0921172
(I.R.S. Employer
Identification No.)City Place One, Suite 300
St. Louis, Missouri 63141
(314) 994-2700(Address, including zip code, and telephone number, including area code,
of registrant's principal executive offices)**ARCH COAL, INC. RETIREMENT ACCOUNT PLAN**

(Full Title of the Plan)

Robert G. Jones
Vice President — Law, Secretary and General Counsel
Arch Coal, Inc.
One CityPlace Drive, Suite 300
St. Louis, Missouri 63141
(314) 994-2700(Name, address, including zip code, and telephone number,
including area code, of agent for service)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share(1)	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(1)
Common Stock, \$.01 par value per share	295,000 Shares(2)	\$58.175	\$17,161,625	\$2,019.92

(1) Computed pursuant to Rule 457(h) solely for the purpose of determining the registration fee.

(2) This Registration Statement also covers such additional shares of Common Stock as may be issuable pursuant to antidilution provisions.

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PART II

INFORMATION REQUIRED IN THE
REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by Arch Coal, Inc. (the “Registrant”) with the Securities and Exchange Commission pursuant to the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), are incorporated by reference into this Registration Statement:

- (a) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2004;
- (b) The Registrant’s Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2005 and June 30, 2005;
- (c) All other reports filed by the Registrant pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) since the end of the fiscal year referred to in (a) above; and
- (d) The description of the Registrant’s Common Stock, par value \$.01 per share (the “Common Stock”), contained in the Registrant’s Registration Statement on Form 8-B filed on June 17, 1997 under the Exchange Act.

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents. Any statement contained herein or in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

Item 4. Description of Securities.

The description of the Common Stock, and related Preferred Stock Purchase Rights, contained in Item 1 of the Registrant’s Registration Statement on Form 8-B filed on June 17, 1997 under the Exchange Act is incorporated herein by reference. The securities are registered under Section 12(b) of the Exchange Act.

Item 5. Interest of Named Experts and Counsel.

The legality of the Common Stock to be issued pursuant to the Plan will be passed upon for the Company by Robert G. Jones, Vice President – Law, Secretary and General Counsel of the Company, who beneficially owns 4,552 shares of common stock.

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Item 6. Indemnification of Directors and Officers.

In accordance with Delaware law, the Registrant's Restated Certificate of Incorporation, as amended, contains provisions that result in the elimination of the personal liability of directors to the Registrant and its stockholders for monetary damages for breaches of their fiduciary duties as a director, except for (i) breach of a director's duty of loyalty to the company or to the stockholders, (ii) acts of omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (iii) dividend or stock repurchases or redemptions that are illegal under Delaware law, and (iv) any transaction for which a director receives an improper personal benefit. These provisions pertain only to breaches of duty by directors as directors and not in any other capacity, such as officers. As a result of the inclusion of such provisions, stockholders may be unable to recover monetary damages against directors for actions taken by them that constitute negligence or gross negligence or that are in violation of their fiduciary duties, although it may be possible to obtain injunctive or other equitable relief with respect to such actions. If equitable remedies are found not to be available to stockholders in any particular case, stockholders may not have any effective remedy against the challenged conduct.

Under Section 145 of the Delaware General Corporation law, a corporation has the power to indemnify directors and officers under certain prescribed circumstances and subject to certain limitations against certain costs and expenses, including attorneys' fees actually and reasonably incurred in connection with any action, suit or proceeding, whether civil, criminal, administrative or investigative, to which any of them is a party by reason of this being a director or officer of the corporation if it is determined that he acted in accordance with the applicable standard of conduct set forth in such statutory provision. Article V of the Registrant's Bylaws provides that the Registrant will indemnify any person who may be involved, as a party or otherwise, in a claim, action, suit or proceeding (other than any claim, action, suit or proceeding brought by or in the right of the Registrant) by reason of the fact that such person is or was a director or officer of the Registrant, or is or was serving at the request of the Registrant as a director or officer of any other corporation or entity, against certain liabilities, costs and expenses. The Registrant is also authorized to and does maintain insurance on behalf of any person who is or was a director or officer of the Registrant, or is or was serving at the request of the Registrant as a director or officer of any other corporation or entity, against any liability asserted against such person and incurred by such person in any such capacity or arising out of his status as such, whether or not the Registrant would have the power to indemnify such person against such liability under the Delaware General Corporation law.

The Registrant has entered into indemnity agreements with persons who are directors and/or officers of the Registrant.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Reference is made to the Exhibit Index filed herewith.

Item 9. Undertakings.

(a) The undersigned registrant hereby undertakes:

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(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing

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provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in St. Louis, Missouri on August 12, 2005.

ARCH COAL, INC.

By: /s/ Robert G. Jones

Robert G. Jones
Vice President – Law, General Counsel and
Secretary

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>*</u> Steven F. Leer and Director	President, Chief Executive Officer	August 12, 2005
<u>/s/ Robert J. Messey</u> Robert J. Messey	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)	August 12, 2005
<u>*</u> James R. Boyd	Chairman of the Board and Director	August 12, 2005
<u>*</u> Frank M. Burke	Director	August 12, 2005
<u>*</u> Patricia Fry Godley	Director	August 12, 2005
<u>*</u> Douglas H. Hunt	Director	August 12, 2005
<u>*</u> Thomas A. Lockhart	Director	August 12, 2005
<u>*</u> A. Michael Perry	Director	August 12, 2005

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<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>*</u> Robert G. Potter	Director	August 12, 2005
<u>*</u> Theodore D. Sands	Director	August 12, 2005
<u>Wesley M. Taylor</u>	Director	

*By: /s/ Robert G. Jones
Robert G. Jones
As Attorney-in-fact

ORIGINAL POWERS OF ATTORNEY AUTHORIZING STEVEN F. LEER AND ROBERT G. JONES, AND EACH OF THEM, TO SIGN THIS REGISTRATION STATEMENT ON FORM S-8 AND ANY FURTHER AMENDMENTS THERETO ON BEHALF OF THE ABOVE NAMED PERSONS IS ATTACHED HERETO AS EXHIBIT 24.

ARCH COAL, INC.

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
3.1	Amended and Restated Certificate of Incorporation of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended March 31, 2000)
3.2	Amended and Restated Bylaws of Arch Coal, Inc. (incorporated herein by reference to Exhibit 3.2 to the Company's Annual Report on Form 10-K for the Year Ended December 31, 2000)
4.1	Form of Rights Agreement, dated March 3, 2000 (incorporated herein by reference to Exhibit 1 to a Current Report on Form 8-A filed on March 9, 2000)
5.1	Opinion of Robert G. Jones regarding the validity of the Common Stock
23.1	Consent of Ernst & Young LLP
23.3	Consent of Robert G. Jones (included in Exhibit 5.1)
24	Power of Attorney (filed herewith)

Arch Coal, Inc.
One CityPlace Drive, Suite 300
St. Louis, MO 63141

August 12, 2005

Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, DC 20549

Ladies and Gentlemen:

I have acted as counsel to Arch Coal, Inc., a Delaware corporation (the "Company"), in connection with the filing of a Registration Statement on Form S-8 ("Registration Statement") with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Act"), covering the offering and sale of up to 295,000 shares of the Company's Common Stock, par value \$.01 per share (the "Common Stock"), under the Company's Retirement Account Plan (the "Plan").

In connection herewith, I have examined and relied without independent investigation as to matters of fact upon such certificates of public officials, such statements and certificates of officers of the Company and originals or copies certified to our satisfaction of the Registration Statement, the Restated Certificate of Incorporation and the By-laws of the Company, proceedings of the Board of Directors of the Company and such other corporate records, documents, certificates and instruments as we have deemed necessary or appropriate in order to enable us to render the opinions expressed below. In rendering this opinion, I have assumed the genuineness of all signatures on all documents examined by us, the authenticity of all documents submitted to us as originals and the conformity to authentic originals of all documents submitted to us as certified or photostatted copies.

Based upon the foregoing and in reliance thereon, and subject to the qualifications and limitations stated herein, I am of the opinion that:

- (1) The Company is a corporation validly existing in good standing under the laws of the State of Delaware;
- (2) When,
 - (i) the Registration Statement shall have become effective under the Act; and
 - (ii) the shares of Common Stock being offered and sold by the Company pursuant to the Registration Statement have been duly issued and sold;then such shares of Common Stock will be legally issued, fully paid and non-assessable.

This opinion is not rendered with respect to any laws other than the General Corporation Law

of the State of Delaware and the Act.

I hereby consent to the filing of this opinion as an exhibit to the Registration Statement. I also consent to your filing copies of this opinion as an exhibit to the Registration Statement with agencies of such states as you deem necessary in the course of complying with the laws of such states regarding the offering and sale of such shares of Common Stock.

In giving this consent, I do not admit that I am in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

/s/ Robert G. Jones

Robert G. Jones

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-xxxxx) pertaining to the Arch Coal, Inc. Retirement Plan of our report dated February 23, 2005, with respect to the consolidated financial statements and schedule of Arch Coal, Inc., Arch Coal, Inc. management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of Arch Coal, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2004, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

St. Louis, Missouri
August 11, 2005

