

SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

FORM S-3
 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.)

CityPlace 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)

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

Copies to:

Ronald D. West
 David J. Grecco
 Kirkpatrick & Lockhart LLP
 1500 Oliver Building
 Pittsburgh, Pennsylvania 15222
 (412) 355-6500

Susan Webster
 Cravath, Swaine & Moore
 Worldwide Plaza
 825 Eighth Avenue
 New York, New York 10019
 (212) 474-1000

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 333-45198

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box.

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
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Common stock, par value \$.01 per share.....	1,590,265 shares	\$19.00	\$30,215,035	\$7,554
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(1) Includes 140,265 shares that the underwriter may purchase to cover over-allotments.

(2) Based upon the public offering price.

EXPLANATORY NOTE

This registration statement is being filed with respect to the registration of additional shares of Common Stock, par value \$.01 per share, of Arch Coal, Inc., a corporation organized under the laws of the State of Delaware (the "Company"), pursuant to Rule 462(b) under the Securities Act of 1933, as amended ("Rule 462(b)"). Pursuant to Rule 462(b), the contents of the registration statement of the Company (File No. 333-45198), as amended, which was declared effective on February 14, 2001 (the "Earlier Registration Statement"), including the exhibits thereto, are incorporated by reference into this registration statement. The form of prospectus contained in such Earlier Registration Statement will reflect the aggregate amount of securities registered in this Registration Statement and the Earlier Registration Statement.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Louis, State of Missouri, on February 15, 2001.

Arch Coal, Inc.

/s/ Steven F. Leer

By: _____
 Steven F. Leer
 President and Chief Executive
 Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature -----	Capacity -----	Date ----
_____ /s/ Steven F. Leer Steven F. Leer	President, Chief Executive Officer and Director (Principal Executive Officer)	February 15, 2001
_____ /s/ Robert J. Messey Robert J. Messey	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 15, 2001
_____ /s/ John W. Lorson John W. Lorson	Controller and Chief Accounting Officer	February 15, 2001
_____ * Philip W. Block	Director	
_____ * James R. Boyd	Director	
_____ * Thomas L. Feazell	Director	
_____ * Robert L. Hintz	Director	
_____ * Douglas H. Hunt	Director	
_____ * James L. Parker	Director	
_____ * A. Michael Perry	Director	

Signature

Capacity

Date

*

Director

Theodore D. Sands

*

Director

Ignacio Dominguez Urquijo

/s/ Robert G. Jones

February 15, 2001

*By:

Attorney-in-Fact

Exhibit No. -----	Description -----
5.1	Opinion of Robert G. Jones as to the legality of the shares being registered (filed herewith)
23.1	Consent of Robert G. Jones (included in Exhibit 5.1)
23.2	Consent of Ernst & Young LLP (filed herewith)
24	Power of Attorney (incorporated by reference from the Registration Statement on Form S-3 (No. 333-45198) filed with the Securities and Exchange Commission September 6, 2000)

[Arch Coal letterhead]

February 15, 2001

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

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

I am the Vice President--Law & General Counsel of Arch Coal, Inc., a Delaware corporation (the "Company"), and have acted as such in connection with the Registration Statement on Form S-3 (the "Registration Statement"), filed by the Company with the Securities and Exchange Commission pursuant to Rule 462(b) under the Securities Act of 1933, as amended, relating to the public offering of Common Stock, par value \$.01 per share, of the Company contemplated by the registration statement on Form S-3 (Registration No. 333-45198), as amended, which was declared effective on February 14, 2001 (the "Initial Registration Statement"). The Registration Statement covers the registration of 1,590,265 shares of Common Stock (the "Shares"), including 140,265 shares as to which Merrill Lynch, Pierce, Fenner & Smith, the underwriter, will have an option to purchase solely for the purpose of covering over-allotments.

I am familiar with the Registration Statement and the Initial Registration Statement and related prospectus. I have reviewed the Company's Amended and Restated Certificate of Incorporation, as amended, and Amended and Restated Bylaws. I have also examined such other public and corporate documents, certificates, instruments and corporate records, and such questions of law, as I have deemed necessary for purposes of expressing an opinion on the matters hereinafter set forth.

On the basis of the foregoing, I am of the opinion that the Shares are duly authorized and, when issued and sold as described under the caption "Underwriting" in the prospectus forming part of the Initial Registration Statement, will have been validly issued and be fully paid and non-assessable.

I consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement.

Yours truly

/s/ Robert G. Jones

Robert G. Jones
Vice President--Law & General
Counsel

Consent of Independent Auditors

We consent to the incorporation by reference, in this Registration Statement on Form S-3 for the registration of 1,590,265 shares of Arch Coal, Inc.'s common stock, of the reference to our firm under the caption "Experts" included in the Registration Statement (Form S-3 No. 333-45198) and the incorporation by reference therein of our reports dated January 21, 2000, with respect to the consolidated financial statements of Arch Coal, Inc., incorporated by reference in its Annual Report (Form 10-K/A No. 1) for the year ended December 31, 1999, as amended and the related financial statement schedule and the financial statements of Canyon Fuel Company, LLC included therein, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP
St. Louis, Missouri
February 14, 2001