

ARCH COAL INC  
Form 4  
December 18, 2006

**FORM 4**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
**BESTEN C HENRY JR**

(Last) (First) (Middle)

**ONE CITYPLACE DRIVE, SUITE 300**

(Street)

**ST. LOUIS, MO 63141**

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
**ARCH COAL INC [ACI]**

3. Date of Earliest Transaction (Month/Day/Year)  
**12/15/2006**

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

\_\_\_ Director \_\_\_ 10% Owner  
 Officer (give title below) \_\_\_ Other (specify below)

Senior VP-Strategic Dev.

6. Individual or Joint/Group Filing(Check Applicable Line)

Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Ownership (Instr. 4) |     |       |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|-----|-------|
|                                 |                                      |  |                                | (A) or (D)  | Code  | V  | Amount                            | (D) | Price |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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SEC 1474  
(9-02)

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security | 2. Conversion or Exercise | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any | 4. Transaction Code | 5. Number of | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security |
|---------------------------------|---------------------------|--------------------------------------|-----------------------------------|---------------------|--------------|--|---|---------------------------------|
|---------------------------------|---------------------------|--------------------------------------|-----------------------------------|---------------------|--------------|--|---|---------------------------------|

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| (Instr. 3)    | Price of Derivative Security | (Month/Day/Year) | (Instr. 8) | Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | (Instr. 5) |     |                  |                 |              |                            |          |
|---------------|------------------------------|------------------|------------|--|------------|-----|------------------|-----------------|--------------|----------------------------|----------|
|               |                              |                  | Code       | V  | (A)        | (D) | Date Exercisable | Expiration Date | Title        | Amount or Number of Shares |          |
| Phantom Stock | (1)                          | 12/15/2006       | A          |  | 13         |     | (2)              | (2)             | Common Stock | 13                         | \$ 33.97 |

## Reporting Owners

| Reporting Owner Name / Address   | Relationships |           |                          |       |
|--|---------------|-----------|--------------------------|-------|
|  | Director      | 10% Owner | Officer                  | Other |
| BESTEN C HENRY JR<br>ONE CITYPLACE DRIVE<br>SUITE 300<br>ST. LOUIS, MO 63141 |               |           | Senior VP-Strategic Dev. |       |

## Signatures

/s/ Gregory A. Billhartz,  
Attorney-in-Fact  
12/18/2006

\*\*Signature of Reporting Person

Date

## Explanation of Responses:

\* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

- Each share of phantom stock represents a right to receive the value in cash of one share of Arch Coal, Inc. common stock. The shares of phantom stock are held by the Executive Officer through the Arch Coal, Inc. Deferred Compensation Plan (the "Plan"). The shares of phantom stock acquired by the executive officer represent dividends attributable to amounts that the executive officer elected to defer under the Plan into a hypothetical investment in shares of Arch Coal, Inc. common stock.
- (1) Shares of phantom stock are payable in cash on the date or dates elected by the executive officer, subject to the terms of the Plan. The executive officer may transfer any and all of the phantom stock account into an alternative investment account at any time.
- (2) Shares of phantom stock are payable in cash on the date or dates elected by the executive officer, subject to the terms of the Plan. The executive officer may transfer any and all of the phantom stock account into an alternative investment account at any time.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.