

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person: BESTEN C HENRY JR
2. Issuer Name and Ticker or Trading Symbol: ARCH COAL INC [ACI]
3. Date of Earliest Transaction (Month/Day/Year): 03/15/2007
5. Relationship of Reporting Person(s) to Issuer: X Officer (give title below) Senior VP-Strategic Dev.

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

Table with 7 columns: 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 Following Reported Transaction(s) (Instr. 3 and 4), 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4), 7. Nature of Indirect Beneficial Ownership (Instr. 4)

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

Table with 11 columns: 1. Title of Derivative Security (Instr. 3), 2. Conversion or Exercise Price of Derivative Security, 3. Transaction Date (Month/Day/Year), 3A. Deemed Execution Date, if any (Month/Day/Year), 4. Transaction Code (Instr. 8), 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5), 6. Date Exercisable and Expiration Date (Month/Day/Year), 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4), 8. Price of Derivative Security (Instr. 5), 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4), 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4), 11. Nature of Indirect Beneficial Ownership (Instr. 4)

Explanation of Responses:

- 1. 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.
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.

Remarks:

/s/ Gregory A. Billhartz, 03/19/2007
Attorney-in-Fact

** Signature of Reporting Person Date

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

* 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).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.