Slone Deck Form 4 February 27, 2007

FORM 4

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Form 4 or

Form 5

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

OMB APPROVAL OMB

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SECURITIES Section 16. Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,

obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction 1(b).

(Zip)

(Print or Type Responses)

1. Name and Address of Reporting Person * 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading Slone Deck Issuer Symbol ARCH COAL INC [ACI] (Check all applicable) (First) (Middle) (Last) 3. Date of Earliest Transaction (Month/Day/Year) Director 10% Owner X_ Officer (give title Other (specify ONE CITYPLACE DRIVE, SUITE 02/23/2007 below) 300 VP Investor Rel & Public Aff (Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check Filed(Month/Day/Year) Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person

ST. LOUIS, MO 63141

(State)

(City)

(,)	Table 1 - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned										
1.Title of	2. Transaction Date	2A. Deemed	3.	4. Securi	ties		5. Amount of	6. Ownership	7. Nature of		
Security	(Month/Day/Year)	Execution Date, if	Transactio	onAcquired	l (A) o	r	Securities	Form: Direct	Indirect		
(Instr. 3)		any	Code	Disposed of (D)			Beneficially	(D) or	Beneficial		
		(Month/Day/Year)	(Instr. 8)	(Instr. 3, 4 and 5)		Owned	Indirect (I)	Ownership			
							Following	(Instr. 4)	(Instr. 4)		
					(Reported				
					(A)		Transaction(s)				
			Code V	Amount	or (D)	Price	(Instr. 3 and 4)				
Common Stock	02/23/2007		A	500	A	<u>(1)</u>	500	D			

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

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Table I. Non Desirative Securities Assured Disposed of an Beneficially Or

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

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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 orDerivative 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 Underlying Securities (Instr. 3 and 4)	
				Code V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Restricted Stock Units	<u>(2)</u>	02/23/2007		M		500	<u>(3)</u>	<u>(4)</u>	Common Stock	500
Employee Stock Option (right to buy)	\$ 32.99	02/22/2007		A	17,700		<u>(5)</u>	02/21/2017	Common Stock	17,700

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

VP Investor Rel & Public Aff

Slone Deck

ONE CITYPLACE DRIVE

SUITE 300 ST. LOUIS, MO 63141

Signatures

/s/ Gregory A. Billhartz,
Attorney-in-Fact
02/27/2007

**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).
- (1) The reporting person received 1,500 restricted stock units on February 23, 2006. The restricted stock units vest ratably over a three-year period. Upon veting of 500 restricted stock units on February 23, 2007, the reporting person received 500 shares of common stock.
- (2) Each restricted stock unit represents a right to receive one share of common stock unless otherwise deferred, at the reporting person's election, pursuant to the Arch Coal, Inc. Executive Deferred Compensation Plan.
- (3) The reporting person received 1,500 restricted stock units on February 23, 2006. The restricted stock units vest ratably over a three-year period. On February 23, 2007, 500 restricted stock units vested.
- (4) The restricted stock units do not expire.
- (5) The option vests in three equal annual installments beginning on February 22, 2008.

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.

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