Rainey Gregory P Form 4 November 23, 2010

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

Check this box if no longer STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF subject to

SECURITIES Section 16. Form 4 or Form 5 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).

(Print or Type Responses)

1. Name and Address of Reporting Person *

Rainey Gregory P

2. Issuer Name and Ticker or Trading

Symbol

CAS MEDICAL SYSTEMS INC

[CASM]

(Last) (First) (Middle) 3. Date of Earliest Transaction

> (Month/Day/Year) 11/19/2010

C/O CAS MEDICAL SYSTEMS, INC., 44 EAST INDUSTRIAL

ROAD

(Street) 4. If Amendment, Date Original

Filed(Month/Day/Year)

3.

6. Individual or Joint/Group Filing(Check

5. Relationship of Reporting Person(s) to

(Check all applicable)

10% Owner

Other (specify

Applicable Line)

X_ Director

Officer (give title

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

D

Issuer

BRANFORD, CT 06405

(City) (State) (Zip)

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

1.Title of 2. Transaction Date 2A. Deemed Security (Month/Day/Year) Execution Date, if (Instr. 3)

TransactionAcquired (A) or Code Disposed of (D) (Month/Day/Year) (Instr. 8) (Instr. 3, 4 and 5)

5. Amount of Securities Beneficially Owned Following

6. Ownership 7. Nature of Form: Direct Indirect (D) or Beneficial Indirect (I) Ownership (Instr. 4) (Instr. 4)

OMB APPROVAL

3235-0287

January 31,

2005

0.5

OMB

Number:

Expires:

response...

Estimated average

burden hours per

Reported (A) Transaction(s) (Instr. 3 and 4)

Code V Amount (D) Price

4. Securities

Common \$0 11/19/2010 1.977 1,977 (1) Stock

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

Persons who respond to the collection of SEC 1474 information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

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

(9-02)

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1. Title of	2.	3. Transaction Date		4.	5.	6. Date Exerc		7. Title		8. Price of	9. Nu
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transacti	onNumber	ber Expiration Date		Amount of		Derivative	Deriv
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Underl	ying	Security	Secui
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Derivative	e	Securities		(Instr. 5)	Bene	
	Derivative				Securities Acquired			(Instr. 3 and 4)			Owne
	Security										Follo
	·				(A) or					Repo	
					Disposed						Trans
					of (D)						(Instr
					(Instr. 3,						
					4, and 5)						
					,)						
									Amount		
						Date Exercisable	Expiration Date		or		
								Title	Number		
									of		
				Code V	(A) (D)				Shares		

Reporting Owners

Reporting Owner Name / Address

Director 10% Owner Officer Other

Rainey Gregory P C/O CAS MEDICAL SYSTEMS, INC. 44 EAST INDUSTRIAL ROAD BRANFORD, CT 06405

X

Signatures

/s/Gregory P. 11/23/2010 Rainey

**Signature of Date
Reporting Person

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) Grant of restricted common stock with 205 shares vesting on December 9, 2010 and 886 shares vesting on each of March 9, 2011 and June 9, 2011.

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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