PUMA MARY G Form 4 July 06, 2009

FORM 4

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

OMB APPROVAL

OMB 3235-0287 Number:

Expires: January 31, 2005

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Check this box if no longer subject to Section 16. Form 4 or

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Form 5 obligations may continue. See Instruction

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

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * PUMA MARY G			2. Issuer Name and Ticker or Trading Symbol AXCELIS TECHNOLOGIES INC [ACLS]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)			
(Last) C/O AXCEL INC., 108 CH		,	3. Date of Earliest Transaction (Month/Day/Year) 07/01/2009	X Director 10% OwnerX Officer (give title Other (specify below) Chairman, President and CEO			
BEVERLY,	(Street) MA 01915		4. If Amendment, Date Original Filed(Month/Day/Year)	6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person			

(City)	(State)	(Zip) Tab	le I - Non-	Derivative	Secur	ities Acqui	ired, Disposed of,	, or Beneficial	ly Owned
1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transactic Code (Instr. 8)	4. Securit ord Dispos (Instr. 3, 4)	sed of	5) Price	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)
Common Stock	07/01/2009		F	16,200	D (1)	\$ 0.4532 (2)	310,620	D	
Common Stock	07/03/2009		F	13,228	D (3)	\$ 0.39 (4)	297,392 (5)	D	
Common Stock							20,000	I	Shares held by spouse

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	2.	3. Transaction Date	3A. Deemed	4.	5.	6. Date Exerc	isable and	7. Titl	e and	8. Price of	9
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transacti	orNumber	Expiration Da	ate	Amou	nt of	Derivative	J
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Under	lying	Security	,
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Derivative	e		Secur	ities	(Instr. 5)]
	Derivative				Securities			(Instr.	3 and 4)		(
	Security				Acquired						J
					(A) or]
					Disposed						-
					of (D)						(
					(Instr. 3,						
					4, and 5)						
									Amount		
						Date	Expiration	m	or		
						Exercisable Date	Date	Title	Number		
				~					of		
				Code V	(A) (D)				Shares		

Reporting Owners

Relationships Reporting Owner Name / Address

> Director 10% Owner Officer Other

PUMA MARY G C/O AXCELIS TECHNOLOGIES, INC. 108 CHERRY HILL DRIVE BEVERLY, MA 01915

X

Chairman, President and CEO

Signatures

By Lynnette C. Fallon, attorney in fact for Mary G. 07/06/2009 Puma

> **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).
- Shares withheld by the Company equal to tax liability of the executive officer incident to the vesting of restricted stock units issued in accordance with Rule 16b-3.
- (2) Represents the closing price of the common stock at July 1, 2009.
- Shares withheld by the Company equal to tax liability of the executive officer incident to the vesting of restricted stock units issued in accordance with Rule 16b-3.
- (4) Represents the closing price of the common stock at July 6, 2009 (the first trading day after the vesting date).
- (5) Of the shares held as of July 3, 2009, 95,347 were issuable on vesting of restricted stock units granted the executive under the 2000 Stock Plan and are subject to forfeiture. A portion of these shares will be withheld by the Company on vesting to satisfy tax withholding

Reporting Owners 2

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requirements.

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.