SEC Form 4

FORM 4

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

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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*	2. Issuer Name **and** Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)
PUMA MARY G	**AXCELIS TECHNOLOGIES INC** [ACLS]	X Director — 10% Owner
(Last) (First) (Middle)	3. Date of Earliest Transaction (Month/Day/Year)	X Officer (give title below) — Other (specify below)
C/O AXCELIS TECHNOLOGIES, INC. 108 CHERRY HILL DRIVE	11/17/2008	Chairman, President and CEO
(Street)	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line)
BEVERLY MA 01915		X Form filed by One Reporting Person
(City) (State) (Zip)		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 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)
			Code	V	Amount	(A) or (D)	Price			

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

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)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Stock option (right to buy)	$0.7	11/17/2008		A[1]		250,000		11/17/2012[2]	11/17/2018	Common Stock	250,000	$0	250,000	D	

Explanation of Responses:

1. Granted Pursuant to the Axcelis Technologies, Inc. 2000 Stock Plan.

2. Exercisable as to 25% of the total shares on each of 11/17/2009, 11/17/2010, 11/17/2011 and 11/17/2012, provided that the common stock closes at or above $5.00 per share for 20 consecutive trading days on one or more occasions prior to exercise.

Lynnette C. Fallon, as attorney in fact for Mary G. Puma — 11/18/2008

** 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.