

VAN MAAREN JAN PAUL
 Form 4/A
 December 27, 2004

FORM 4

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

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

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

(Print or Type Responses)

1. Name and Address of Reporting Person *
 VAN MAAREN JAN PAUL

2. Issuer Name and Ticker or Trading Symbol
 AXCELIS TECHNOLOGIES INC
 [ACLS]

5. Relationship of Reporting Person(s) to Issuer
 (Check all applicable)

(Last) (First) (Middle)
 C/O AXCELIS TECHNOLOGIES, INC., 108 CHERRY HILL DRIVE
 (Street)

3. Date of Earliest Transaction
 (Month/Day/Year)
 12/27/2004

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
 VP and GM, CCS

BEVERLY, MA 01915

4. If Amendment, Date Original Filed(Month/Day/Year)
 12/27/2004

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

(City) (State) (Zip)

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 Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Ownership (Instr. 4) | | |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|-----|-------|
| | | | | (A) or (D) | Code | V | Amount | (D) | Price |

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

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 control number.

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 Derivative | 2. Conversion | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if | 4. Transaction | 5. Number of Derivative | 6. Date Exercisable and Expiration Date | 7. Title and Amount of Underlying Securities |
|------------------------|---------------|--------------------------------------|-------------------------------|----------------|-------------------------|---|--|
|------------------------|---------------|--------------------------------------|-------------------------------|----------------|-------------------------|---|--|

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| Security (Instr. 3) | or Exercise Price of Derivative Security | any (Month/Day/Year) | Code (Instr. 8) | Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | (Month/Day/Year) | (Instr. 3 and 4) | | | | |
|-----------------------------|--|----------------------|------------------|---|------------------|------------------|---------------------------|-----------------|--------------|----------------------------|
| | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares |
| Stock option (right to buy) | \$ 7.97 | 12/27/2004 | A ⁽¹⁾ | | 12,500 | | 06/25/2008 ⁽²⁾ | 06/25/2014 | Common Stock | 12,500 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|----------------|-------|
| | Director | 10% Owner | Officer | Other |
| VAN MAAREN JAN PAUL C/O AXCELIS TECHNOLOGIES, INC. 108 CHERRY HILL DRIVE BEVERLY, MA 01915 | | | VP and GM, CCS | |

Signatures

Lynnette C. Fallon, as attorney-in-fact for Jan Paul van Maaren
 12/27/2004
 **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) Granted Pursuant to the Axcelis Technologies, Inc. 2000 Stock Plan.
- (2) Exercisable as to 25% of the total shares on each of 6/25/2005, 6/25/2006, 6/25/2007 and 6/25/2008.

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.