FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

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 Add | | Person* | 2. Issuer Name and Ticker or Trading Symbol AXCELIS TECHNOLOGIES INC ACLS | | ationship of Reporting P k all applicable) | erson(s) to Issuer | | | | |
|---|---------|----------|--|---|---|--------------------|--|--|--|--|
| <u>Titinger Jorge</u> | | | | X | Director | 10% Owner | | | | |
| , | | | | | Officer (give title | Other (specify | | | | |
| (Last) (First) (Middle) | | (Middle) | 3. Date of Earliest Transaction (Month/Day/Year) | | below) | below) | | | | |
| C/O AXCELIS TECHNOLOGIES, INC. 108 CHERRY HILL DRIVE | | | 05/15/2023 | | | | | | | |
| | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Individual or Joint/Group Filing (Check Applicable Line) | | | | | | |
| | | | - | X | X Form filed by One Reporting Person | | | | | |
| (Street) BEVERLY | MA | 01915 | | | Form filed by More th Person | nan One Reporting | | | | |
| (City) | (State) | (Zip) | Rule 10b5-1(c) Transaction Indication | | | | | | | |
| | | | Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10. | | | | | | | |

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) | Transaction Code (Instr. | | 4. Securities Disposed Of 5) | | | 5. Amount of Securities Beneficially Owned Following | 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 | Reported Transaction(s) (Instr. 3 and 4) | | |
| Common Stock | 05/15/2023 | | A | | 1,282 | Α | \$0.00 ⁽¹⁾ | 17,196 ⁽²⁾ | D | |

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) | Derivative Conversion Date E Security or Exercise (Month/Day/Year) if | | 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 | | | | |

Explanation of Responses:

1. These shares are issuable on vesting of restricted stock units granted under the Company's 2012 Equity Incentive Plan. Assuming continuation of service on the Board of Directors, these restricted stock units will vest on May 15, 2024.

2. Of the shares held after this grant on of May 15, 2023, 6,086 shares were issuable on vesting of restricted stock units granted to the director under the 2012 Equity Incentive Plan and are subject to forfeiture.

Remarks:

<u>Lynnette C. Fallon, as</u> <u>attorney in fact for Jorge</u> <u>Titinger</u>

05/15/2023

** 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.

OMB APPROVAL

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