## FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

| OMB Number:       | 3235-0287 |  |  |  |  |  |  |  |
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| Estimated average | hurdon    |  |  |  |  |  |  |  |

| Estimated average burden |     |
|--------------------------|-----|
| hours per response:      | 0.5 |

| 1. Name and Addre                     | ss of Reporting Perso<br><u>ERT C</u>  | n*                 | 2. Issuer Name <b>and</b> Ticker or Trading Symbol<br><u>FLUIDIGM CORP</u> [ FLDM ] |                        | tionship of Reporting Perso<br>all applicable)<br>Director<br>Officer (give title                | 10% Owner<br>Other (specify |
|---------------------------------------|--|--------------------|---|------------------------|--|-----------------------------|
| (Last)<br>FLUIDIGM CO<br>7000 SHORELI | (First)<br>RPORATION<br>NE COURT, SUIT | (Middle)<br>TE 100 | 3. Date of Earliest Transaction (Month/Day/Year) 12/07/2012                         |                        | below)<br>P, RESEARCH & DEV  | below)<br>VELOPMENT         |
| (Street)<br>SOUTH SAN<br>FRANCISCO    | СА                                     | 94080              | 4. If Amendment, Date of Original Filed (Month/Day/Year)                            | 6. Indiv<br>Line)<br>X | idual or Joint/Group Filing (<br>Form filed by One Report<br>Form filed by More than (<br>Person | ting Person                 |
| (City)                                | (State)                                | (Zip)              |   |                        |  |                             |

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

| 1. Title of Security (Instr. 3) | 2. Transaction<br>Date<br>(Month/Day/Year) | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) | 3.<br>Transa<br>Code (<br>8) |   | Disposed Of (D) (Instr. 3, 4 and 5) |               |                                 | 5. Amount of<br>Securities<br>Beneficially<br>Owned Following | 6. Ownership<br>Form: Direct<br>(D) or Indirect<br>(I) (Instr. 4) | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership |
|---------------------------------|--|---|------------------------------|---|-------------------------------------|---------------|---------------------------------|---|---|---|
|                                 |  |   | Code                         | v | Amount                              | (A) or<br>(D) | Price                           | Reported<br>Transaction(s)<br>(Instr. 3 and 4)                |   | (Instr. 4)  |
| Common Stock                    | 12/07/2012                                 |   | М                            |   | 3,060                               | A             | \$3.3908                        | 3,060   | D   |   |
| Common Stock                    | 12/07/2012                                 |   | <b>S</b> <sup>(1)</sup>      |   | <b>3,060</b> <sup>(2)</sup>         | D             | \$13.5022 <sup>(2)</sup>        | 0   | D   |   |
| Common Stock                    | 12/07/2012                                 |   | М                            |   | 1,156                               | A             | \$4.0828                        | 1,156   | D   |   |
| Common Stock                    | 12/07/2012                                 |   | <b>S</b> <sup>(1)</sup>      |   | 1,156 <sup>(2)</sup>                | D             | <b>\$13.5022</b> <sup>(2)</sup> | 0   | D   |   |

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

|   | (e.g., puts, cails, warrants, options, convertible securities)        |  |   |                              |   |   |       |  |                    |                 |  |  |       |   |  |  |  |
|---|---|--|---|------------------------------|---|---|-------|--|--------------------|-----------------|--|--|-------|---|--|--|--|
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3) | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) | 4.<br>Transa<br>Code (<br>8) |   | 5. Number<br>of<br>Derivative<br>Securities<br>Acquired<br>(A) or<br>Disposed<br>of (D)<br>(Instr. 3, 4<br>and 5) |       | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |                    | Expiration Date |  | 7. Title and<br>Amount of<br>Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |       | 8. Price of<br>Derivative<br>Security<br>(Instr. 5) | 9. Number of<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s)<br>(Instr. 4) | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|   |   |  |   | Code                         | v | (A)   | (D)   | Date<br>Exercisable  | Expiration<br>Date | Title           | Amount<br>or<br>Number<br>of<br>Shares |  |       |   |  |  |  |
| Employee<br>Stock<br>Option<br>(Right to<br>Buy)    | \$3.3908  | 12/07/2012                                 |   | М                            |   |   | 3,060 | (3)  | 08/02/2015         | Common<br>Stock | 3,060                                  | \$0  | 0     | D   |  |  |  |
| Employee<br>Stock<br>Option<br>(Right to<br>Buy)    | \$4.0828  | 12/07/2012                                 |   | М                            |   |   | 1,156 | (4)  | 11/17/2019         | Common<br>Stock | 1,156                                  | \$0  | 4,624 | D   |  |  |  |

### Explanation of Responses:

1. The sales reported by Mr. Jones were effected pursuant to a Rule 10b5-1 trading plan adopted on February 24, 2012.

2. The "Amount" and "Price" reported in this Column 4 reflect the aggregate number and weighted-average price, respectively, of shares sold. These shares were sold in multiple transactions at prices ranging from \$13.43 to \$13.59, inclusive. The reporting person undertakes to provide to the issuer, any security holder of the issuer, or the SEC staff, upon request, full information regarding the number of shares sold at each separate price within the range set forth herein.

3. The shares subject to the Option fully vested on August 1, 2009.

4. 61% of the shares subject to the Option vested on December 31, 2009, 25% of the remaining 39% of the shares subject to the Option vested on April 1, 2010 and 1/48th of the remaining 39% of the shares subject to the Option shall vest each month thereafter such that all shares subject to the Option shall be fully vested on April 1, 2013.

| /s/ Valerie Barnett, attorney-in-<br>fact | <u>12/11/2012</u> |
|---|-------------------|
|   | <b>D</b> /        |

\*\* Signature of Reporting Person

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.

Date