FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

| OMB APPROVAL | | | | | | | |
|--------------------------|-----|--|--|--|--|--|--|
| OMB Number: 3235-01 | | | | | | | |
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| hours per response: | 0.5 | | | | | | |

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| YOUNG JOHN A | 2. Date of Event Requiring Statement (Month/Day/Year) 02/09/2011 3. Issuer Name and Ticker or Trading Symbol FLUIDIGM CORP [FLDM] | | | | | | | | | |
|--|--|--------------------|---|--|------------------------------------|--|---|--|--|--|
| (Last) (First) (Middle) C/O FLUIDIGM CORPORATION | | | Relationship of Reporting Perso (Check all applicable) X Director | on(s) to Issue | (Mo | Amendment, Danth/Day/Year) | ate of Original Filed | | | |
| 7000 SHORELINE COURT SUITE 100 | | | Officer (give title below) | Other (spe | , [0.11 | ndividual or Joint licable Line) | /Group Filing (Check | | | |
| (Street) SOUTH SAN FRANCISCO CA 94080 | | | | | 2 | - | y One Reporting Person y More than One erson | | | |
| (City) (State) (Zip) | | | | | | | | | | |
| Table I - Non-Derivative Securities Beneficially Owned | | | | | | | | | | |
| 1. Title of Security (Instr. 4) | | | 2. Amount of Securities Beneficially Owned (Instr. 4) | | | 4. Nature of Indirect Beneficial Ownership (Instr. 5) | | | | |
| Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | |
| 1. Title of Derivative Security (Instr. 4) | 2. Date Exercisable and Expiration Date (Month/Day/Year) | | 3. Title and Amount of Securities Underlying Derivative Security (Instr. | | 4. Conversion or Exercise | | 6. Nature of Indirect Beneficial Ownership (Instr. 5) | | | |
| | Date Exercisable | Expiration Date | n Title | Amount or Number of Shares | Price of Derivative Security | or Indirect (I) (Instr. 5) | | | | |
| Stock Option (Right to Buy) | (1) | (1) | Common Stock | 8,670(2) | 8.38 | D | | | | |
| Stock Option (Right to Buy) | (3) | (3) | Common Stock | 8,670(2) | 4.45 | D | | | | |

Explanation of Responses:

- 1. 1/12th of the shares subject to such Option shall vest on each monthly anniversary of August 3, 2010 (the "Vesting Commencement Date"), such that the Option will be fully vested on the first annual anniversary of the Vesting Commencement Date. The Option shall expire on January 6, 2021.
- 2. Reflects a 1-for-1.73 reverse stock split of the Issuer's outstanding shares effected February 3, 2011.
- 3. The Option fully vested on August 3, 2010 and shall expire on January 28, 2020.

Remarks:

Exhibit 24 - Power of Attorney

/s/ Gajus V. Worthington, attorney-in-fact 02/09/2011

** 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 5 (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.

POWER OF ATTORNEY

The undersigned, as a Section 16 reporting person of Fluidigm Corporation (the "Company"), hereby constitutes and appoints the officers of the Company and the responsible attorneys and paralegals of Wilson Sonsini Goodrich & Rosati, P.C., and each of them, the undersigned's true and lawful attorney-in-fact to:

- 1. complete and execute Forms ID, 3,4 and 5 and other forms and all amendments thereto as such attorney-in-fact shall in his or her discretion determine to be required or advisable pursuant to Section 16 of the Securities Exchange Act of 1934 (as amended) and the rules and regulations promulgated thereunder, or any successor laws and regulations, as a consequence of the undersigned's ownership, acquisition or disposition of securities of the Company; and
- 2. do all acts necessary in order to file such forms with the Securities and Exchange Commission, any securities exchange or national association, the Company and such other person or agency as the attorney-in-fact shall deem appropriate.

The undersigned hereby ratifies and confirms all that said attorney-in-fact and agents shall do or cause to be done by virtue hereof. The undersigned acknowledges that the foregoing attorney-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934 (as amended).

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms ID, 3, 4 and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the Company and the foregoing attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 2nd day of February, 2011.

Signature: /s/ John Young

John Young