

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

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 APPROVAL | |
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| 1. Name and Address of Reporting Person* <u>JOG VIKRAM</u> (Last) (First) (Middle) <u>FLUIDIGM CORPORATION</u> <u>7000 SHORELINE COURT, SUITE 100</u> (Street) <u>SOUTH SAN FRANCISCO CA 94080</u> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>FLUIDIGM CORP [FLDM]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>Chief Financial Officer</u> |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>03/07/2012</u> | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) | |

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 | | | |
| Common Stock | 03/07/2012 | | M | | 5,661 | A | \$4.45 | 5,661 | D | |
| Common Stock | 03/07/2012 | | s ⁽¹⁾ | | 5,661 ⁽²⁾ | D | \$14.3078 ⁽²⁾ | 0 | 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) | 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 |
| Employee Stock Option (Right to Buy) | \$4.45 | 03/07/2012 | | M | | 5,661 | | (3) | 02/06/2018 | Common Stock | 5,661 | \$0 | 53,786 | D | |

Explanation of Responses:

- The sales reported by Mr. Jog were effected pursuant to a Rule 10b5-1 trading plan adopted on August 30, 2011.
- 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 \$14.21 to \$14.415, 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.
- 18.75% of the shares subject to the Option vested on February 7, 2009 and 1/48th of the shares subject to the Option vest each month thereafter.

/s/ William M. Smith, attorney- 03/08/2012
in-fact

** 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.