

**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	
OMB Number:	3235-0287
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1. Name and Address of Reporting Person* <u>Smith William Maxwell</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 X Officer (give title below) Other (specify below) <u>EVP, Legal Affairs &amp; GC</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>02/17/2012</u>	
		6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person

**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	02/17/2012		M		2,340	A	\$1.82	51,885	D	
Common Stock	02/17/2012		s <sup>(1)</sup>		2,340 <sup>(2)</sup>	D	\$15.6004 <sup>(2)</sup>	49,545	D	
Common Stock	02/21/2012		M		660	A	\$1.82	50,205	D	
Common Stock	02/21/2012		s <sup>(1)</sup>		660	D	\$15.6004 <sup>(3)</sup>	49,545	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	Amount or Number of Shares				
Employee Stock Option (Right to Buy)	\$1.82	02/17/2012		M			2,340	(4)	07/15/2013	Common Stock	2,340	\$0	19,072	D	
Employee Stock Option (Right to Buy)	\$15.49	02/17/2012		A			70,000	(5)	02/16/2022	Common Stock	70,000	\$0	70,000	D	
Employee Stock Option (Right to Buy)	\$1.82	02/21/2012		M			660	(4)	07/15/2013	Common Stock	660	\$0	18,412	D	

**Explanation of Responses:**

- The sales reported by Mr. Smith were effected pursuant to a Rule 10b5-1 trading plan adopted on September 6, 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 \$15.6000 to \$15.6125, 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.
- The shares were to be sold on February 17, 2012. Due to a trading error, these shares were not sold until February 21, 2012 at a price per share of \$14.75; however, the Reporting Person will receive proceeds based upon a sale price of \$15.6004, the weighted-average price per share of shares sold on February 17, 2012.
- The Option fully vested on April 1, 2007.
- 1/48 of the shares subject to the Option vested on the date of grant and 1/48 of the shares subject to the Option will vest on March 1, 2012 and each month thereafter, such that the option will be fully vested on January 1, 2016.

/s/ William M. Smith                      02/22/2012  
 \*\* 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.