FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL									
OMB Number:	3235-0287								
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0.5

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934

						. ,		nvesime		1 7								
1. Name and Address of Reporting Person* CAVE GEORGE H (Last) (First) (Middle) 5005 EAST MCDOWELL ROAD					Session of Earliest Transaction (Month/Day/Year) 3. Date of Earliest Transaction (Month/Day/Year) 03/05/2010									heck all ap	plicable) ector	10% (Owner	
														A belo	below) be)` '	
(Street) PHOENIX AZ 85008 (City) (State) (Zip)						4. If Amendment, Date of Original Filed (Month/Day/Year)								ne) X For For	vidual or Joint/Group Filing (Check Applicable Form filed by One Reporting Person Form filed by More than One Reporting Person			
	Tabl	e I - No	n-Deriv	ative	Sec	curitie	s Ac	quired,	Dis	posed o	f, or	Ben	eficia	illy Own	ed			
Date				Date Execution D Month/Day/Year) if any			n Date,	Transaction Disposed Code (Instr. 5)					d Secu Bene Owne	rities ficially ed Following	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)		
									v	Amount	(4	A) or D)	Price	Trans	action(s)		(111501.4)	
Common 03/05					/2010				G V	1,000() D	\$()	68,438	D			
Common 03/0				/2010			F		1,892(2)		D	\$8	22	66,546	D			
	Та									•				/ Owned	I			
f e Conversion or Exercise Price of Derivative Security 3. Transaction Date Execution Date, if any (Month/Day/Year)		Date,	Transa Code (I	saction e (Instr. Derivative Securities Acquired (A) or Disposed of (D)		rative rities ired r osed)	6. Date Exercisable and Expiration Date (Month/Day/Year)			7. Title and Amount of Securities Underlying Derivative Security (Instr. and 4)		ount	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)		
	(Find ST MCDON X AZ (St Security (Inst Security (In	(First) (ST MCDOWELL ROAD X AZ (State) (Table Security (Instr. 3) Table Conversion or Exercise Price of Derivative (Month/Day/Year)	(First) (Middle) ST MCDOWELL ROAD X AZ 85008 (State) (Zip) Table I - Note Security (Instr. 3) Table II - I (Month/Day/Year) 3A. Deem Executior if any (Month/Day Month/Day Month/Day	(First) (Middle) ST MCDOWELL ROAD X AZ 85008 (State) (Zip) Table I - Non-Deriv Security (Instr. 3) 2. Transal Date (Month/L) (Month/L) 2. Table II - Derivat (e.g., pt Conversion or Exercise Price of Derivative (Month/Day/Year) 2. (Month/Day/Year)	(First) (Middle) ST MCDOWELL ROAD Table I - Non-Derivative Security (Instr. 3) Table II - Derivative (Month/Day/Year) Table II - Derivative Security (e.g., puts, c. price of Derivative (Month/Day/Year) ST MCDOWELL ROAD Table II - Non-Derivative (Month/Day/Year) 3. Diagram (Month/Day/Year) 4. Transaction Date (if any (Month/Day/Year) (Month/Day/Year) (Month/Day/Year) 3. 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Securities Acquired (Month/Day/Year) 5. Ond (Instr. 3, 4 and 5) Amount of Oliginal Filed (Month/Day/Year) 6. Lit (A) or Disposed of, or Beneficially (A) or Disposed of (D) (Instr. 3, 4 and 5) Amount of Number (Month/Day/Year) Amount of Number (Month/Day/Year)	ON SEMICONDUCTOR CORP [ONN] (First) (Middle) ST MCDOWELL ROAD A. Jate of Earliest Transaction (Month/Day/Year) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Own Exercises (Month/Day/Year) (Month/D	GEORGE H (First) (Middle) ST MCDOWELL ROAD (Nate of Earliest Transaction (Month/Day/Year) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned Security (Instr. 3) 2. Transaction Date (Month/Day/Year) (Month/Day/Year) (Month/Day/Year) (Month/Day/Year) (Month/Day/Year) (Month/Day/Year) (A) or Exercise of Derivative Securities Acquired, Disposed of, or Beneficially Owned Following Beneficially Owned Following Reported Transaction (Instr. 3) 2. Transaction Date (Month/Day/Year) (Month/Day/Year)	GEORGE H ON SEMICONDUCTOR CORP [ONN] (Check all applicable) Director 10% of Other below 3/05/2010 ST MCDOWELL ROAD A. If Amendment, Date of Original Filed (Month/Day/Year) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned Execution Date, 10/06 (Month/Day/Year) (Month/Day/Year) Date (Month/Day/Year) (Month/Day/Year) Date (Month/Day/Year) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned Execution Date, 10/06 (Month/Day/Year) (Month/Day/Year) Date (Month/Day/Year) Date (Month/Day/Year) Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) Date (Month/Day/Year) Date (Month/Day/Year) Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned Ce.g., puts, calls, warrants, options, convertible securities) 2. Transaction of Securities Acquired (A) or Date (Month/Day/Year) Date	

Explanation of Responses:

- 1. The Reporting Person made a voluntary gift of these shares of common stock that he owned under the Issuer's Employee Stock Purchase Plan.
- 2. This disposition transaction represents shares withheld by the Issuer pursuant to the Reporting Person's March 5, 2007 award of restricted stock units. On March 5, 2010, certain of these units vested. These shares were withheld to satisfy the Reporting Person's withholding obligations for various taxes and similar items. The Issuer will pay these taxes on behalf of the Reporting Person.

Remarks:

Judith A. Boyle is signing on behalf of the Reporting Person pursuant to a Power of Attorney attached herein as an Exhibit. cave2010poa.TXT

Judith A. Boyle, Attorney-in-

** Signature of Reporting Person

<u>Fact</u>

03/09/2010

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.

POWER OF ATTORNEY (George H. Cave)

I hereby appoint Keith D. Jackson, Donald A. Colvin, and Judith A. Boyle, and each of them, attorney-in-fact for me, each with full power of substitution, to prepare, execute and deliver on my behalf reports required to be filed by me pursuant to Section 16 of the Securities Exchange Act of 1934, as amended ("Section 16"), and Rule 144 and Rule 145 under the Securities \mbox{Act} of 1933 (singly or collectively ("Rule 144")), and any and all related documents and instruments. Among other things, each attorney-in-fact is authorized to file original reports (either electronically or otherwise), signed by $\ensuremath{\mathsf{me}}$ or on my behalf, on Forms 3, 4 and 5, and Form 144 with the Securities and Exchange Commission, any and all related documents and instruments, and to provide any necessary copies of such signed forms, documents and instruments to The NASDAQ Stock Market and ON Semiconductor Corporation as

required by the rules under Section 16 and Rule 144 as in effect from time to time.

This power of attorney is effective from the date hereof until April 15, 2011, unless earlier revoked or terminated.

/s/ GEORGE H. CAVE George H. Cave

Dated: March 1, 2010