

DiMarco Bret
 Form 4
 September 30, 2010

FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549**

OMB APPROVAL

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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(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 DiMarco Bret

2. Issuer Name and Ticker or Trading Symbol
 COHERENT INC [COHR]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)
 PO BOX 54980

3. Date of Earliest Transaction (Month/Day/Year)
 04/30/2010

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
 Exec VP & General Counsel

(Street)
 SANTA CLARA, CA 95056-0980

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 ____ Form filed by More than One Reporting Person

(City) (State) (Zip)

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 | 04/30/2010 | | J | V 699 ⁽¹⁾ A \$ 21.2925 | 5,382 | D | |
| Common Stock | 09/28/2010 | | M | 10,000 A \$ 33.3 | 15,382 | D | |
| Common Stock | 09/28/2010 | | S | ⁽²⁾ 10,000 D ⁽³⁾ 40.2821 | 5,382 | D | |
| Common Stock | 09/28/2010 | | M | 10,000 A \$ 32.95 | 15,382 | D | |
| Common Stock | 09/28/2010 | | S | ⁽²⁾ 10,000 D \$ 40.2821 | 5,382 | D | |

(3)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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(9-02)

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 Underlying Securities (Instr. 3 and 4) | Amount or Number of Shares | |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|----------------------------|--|
| | | | | Code | V (A) (D) | Date Exercisable | Expiration Date | Title | |
| Non Qualified Stock Option (right to buy) | \$ 33.3 | 09/28/2010 | | M | 10,000 | 06/07/2008 06/07/2012 | Common Stock | 10,000 | |
| Non Qualified Stock Option (right to buy) | \$ 32.95 | 09/28/2010 | | M | 10,000 | 04/15/2009 10/03/2013 | Common Stock | 10,000 | |

Reporting Owners

| Reporting Owner Name / Address | Relationships |
|--|----------------------------------|
| | Director 10% Owner Officer Other |
| DiMarco Bret PO BOX 54980 SANTA CLARA, CA 95056-0980 | Exec VP & General Counsel |

Signatures

/s/ John Ambroseo, Pursuant to Power of Attorney 09/30/2010

__Signature of Reporting Person

Date

Explanation of Responses:

* 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).

(1) Purchase under employee stock purchase plan.

(2) Sold Pursuant to a Rule 10b5-1 sales plan adopted on May 28, 2010.

(3) Represents the weighted average sales price for the shares. The range of prices for such sales was \$40.00 to \$40.45.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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