

Brady David J
Form 4
August 20, 2009

FORM 4

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

OMB APPROVAL

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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 *
Brady David J

(Last) (First) (Middle)
35 CROSBY DRIVE
(Street)

BEDFORD, MA 01730

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
HOLOGIC INC [HOLX]

3. Date of Earliest Transaction (Month/Day/Year)
08/20/2009

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

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

___ Director ___ 10% Owner
X Officer (give title below) ___ Other (specify below)

SVP, Human Resources

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 Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|--|
| | | | Code | V | Amount | (D) | Price |
| Common Stock | 08/20/2009 | | M | | 25,000 | A | \$ 3.5625 57,044 |
| Common Stock | 08/20/2009 | | S | | 25,000 | D | \$ 15.6837 32,044 |

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

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(9-02)

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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 Security (Instr. 3 and 4) | | |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--------------|----------------------------|
| | | | | Code | V (A) (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares |
| Non-Qualified Stock Option (right to buy) | \$ 3.5625 | 08/20/2009 | | M | 25,000 | 11/06/2004 | 11/06/2013 | Common Stock | 25,000 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|----------------------|-------|
| | Director | 10% Owner | Officer | Other |
| Brady David J 35 CROSBY DRIVE BEDFORD, MA 01730 | | | SVP, Human Resources | |

Signatures

By: Mark J. Casey, Attorney-In-Fact For: David J. Brady

08/20/2009

__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).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.