

LAPEYRE JAMES M JR  
Form 4  
May 24, 2010

**FORM 4**

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

OMB APPROVAL

OMB Number: 3235-0287  
Expires: January 31, 2005  
Estimated average burden hours per response... 0.5

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 \*  
LAPEYRE JAMES M JR

(Last) (First) (Middle)

2105 CITYWEST  
BOULEVARD, SUITE 400

(Street)

HOUSTON, TX 77042-2839

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
ION GEOPHYSICAL CORP [IO]

3. Date of Earliest Transaction  
(Month/Day/Year)  
05/21/2010

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

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

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

6. Individual or Joint/Group Filing(Check Applicable Line)  
 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) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|---|
|                                 |                                      |  |                                | (A) or (D) Code V Amount (D) Price                                |   |  |   |
| Common stock                    | 05/21/2010                           |  | P                              | 25,000 A \$ 5.1108  | 1,593,707 <sup>(1)</sup>  | D  |   |
| Common stock                    |                                      |  |                                |   | 7,605,345   | I  | Shares held by Laitram, LLC                           |
| Common stock                    |                                      |  |                                |   | 5,700 <sup>(2)</sup>  | I  | Shares held in joint account with wife.               |

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|              |            |   |        |   |           |                        |   |                             |
|--------------|------------|---|--------|---|-----------|------------------------|---|-----------------------------|
| Common stock |            |   |        |   |           | 10,500                 | I | As co-trustee for children. |
| Common Stock | 05/21/2010 | P | 25,000 | A | \$ 5.1172 | 157,600 <sup>(3)</sup> | I | Joint acct with adult child |
| Common Stock | 05/21/2010 | P | 25,000 | A | \$ 5.0841 | 157,600 <sup>(3)</sup> | I | Joint acct with adult child |
| Common Stock | 05/21/2010 | P | 25,000 | A | \$ 5.0792 | 170,380 <sup>(3)</sup> | I | Joint acct with adult child |

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

**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 control number.**

SEC 1474  
(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) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Owned Following Reporting Transaction (Instr. 6) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|---|
|  |  |                                      |  | Code                           | V (A) (D)   | Date Exercisable   | Expiration Date   | Title                                      | Amount or Number of Shares  |

## Reporting Owners

| Reporting Owner Name / Address   | Relationships |           |         |       |
|--|---------------|-----------|---------|-------|
|  | Director      | 10% Owner | Officer | Other |
| LAPEYRE JAMES M JR<br>2105 CITYWEST BOULEVARD<br>SUITE 400<br>HOUSTON, TX 77042-2839 | X             |           |         |       |

## Signatures

/s/ Debra A. Addington,  
attorney-in-fact

05/24/2010

\_\_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) Includes 34,043 shares owned by spouse which are held in reporting owners account. Reporting owner disclaims beneficial ownership of those shares.
  - (2) Reflects the transfer of 3,750 shares to each of the three joint accounts reporting person holds with his children.
  - (3) Includes the 3,750 shares transferred from reporting person's joint account with spouse.

### Remarks:

The reporting person disclaims beneficial ownership of all securities shown as indirectly owned by him.

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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