

LAPEYRE JAMES M JR  
Form 4  
February 24, 2010

**FORM 4**

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

OMB APPROVAL

OMB Number: 3235-0287  
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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 \*  
LAPEYRE JAMES M JR

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

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)  
2105 CITYWEST  
BOULEVARD, SUITE 400  
(Street)

3. Date of Earliest Transaction  
(Month/Day/Year)  
02/24/2010

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

HOUSTON, TX 77042-2839

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)			
				(A) or (D)	Price					
Common stock	02/24/2010		P	V	50,000	A	\$ 4.3578	1,568,707 <sup>(1)</sup>	D	
Common stock								7,605,345	I	Shares held by Laitram, LLC
Common stock								16,950	I	Shares held in joint account with wife.

Common stock	10,500	I	As co-trustee for children.
Common Stock	128,850	I	Joint acct with adult child
Common Stock	128,850	I	Joint acct with adult child
Common Stock	141,630	I	Joint acct with adult child

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)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction (Instr. 5)
				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 2105 CITYWEST BOULEVARD SUITE 400 HOUSTON, TX 77042-2839	X			

## Signatures

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

02/24/2010

\_\_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.

### 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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