PEEBLER ROBERT P

Check this box

if no longer

subject to

Section 16.

Form 4 or

Form 4

December 02, 2009

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

OMB Number:

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January 31, Expires:

OMB APPROVAL

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SECURITIES

Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * PEEBLER ROBERT P

2. Issuer Name and Ticker or Trading Symbol

ION GEOPHYSICAL CORP [IO]

5. Relationship of Reporting Person(s) to

Issuer

(First) (Middle) (Last)

3. Date of Earliest Transaction

(Check all applicable)

Chief Exec Officer

2105 CITYWEST

(Month/Day/Year)

X Director 10% Owner X_ Officer (give title

BOULEVARD, SUITE 400

12/01/2009 below) Other (specify

(Street)

(State)

4. If Amendment, Date Original

A

6. Individual or Joint/Group Filing(Check

Filed(Month/Day/Year)

Applicable Line) _X_ Form filed by One Reporting Person

Form filed by More than One Reporting Person

HOUSTON, TX 77042-2839

1.Title of 2. Transaction Date 2A. Deemed Security (Month/Day/Year) Execution Date, if (Instr. 3)

(Zip)

3. 4. Securities Acquired Transaction(A) or Disposed of Code (D) (Instr. 8) (Instr. 3, 4 and 5)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 5. Amount of 6. Ownership 7. Nature of Securities Form: Direct Indirect Beneficially (D) or Beneficial Indirect (I) Ownership Owned Following (Instr. 4) (Instr. 4) Reported

D

(A)

Transaction(s) (Instr. 3 and 4)

Code V Amount (D) Price

Common stock

(City)

12/01/2009

10,000 A \$0 436,171 (1)

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

(Month/Day/Year)

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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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. Transacti Code (Instr. 8)	5. onNumber of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	.	ate	7. Title Amour Underl Securit (Instr.	nt of ying	8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene Owne Follo Repo Trans (Instr
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares		

Reporting Owners

Reporting Owner Name / Address	Relationships						
. 9	Director	10% Owner	Officer	Other			
PEEBLER ROBERT P 2105 CITYWEST BOULEVARD SUITE 400 HOUSTON, TX 77042-2839	X		Chief Exec Officer				

Signatures

/s/ Debra A. Addington, attorney-in-fact 12/02/2009

**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).
- (1) Issued pursuant to the ION Geophysical Corporation 2004 Long-term Incentive Plan.

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.

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