#### ION GEOPHYSICAL CORP

Form 4

August 18, 2008

## FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

**SECURITIES** 

OMB Number:

3235-0287

Expires:

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**OMB APPROVAL** 

Check this box if no longer subject to Section 16. Form 4 or Form 5

obligations may continue.

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

See Instruction

1(b).

(Print or Type Responses)

| Name and Address of Reporting Pers     SMITH SAM K | 2. Issuer Name and Ticker or Trading Symbol ION GEOPHYSICAL CORP [IO] | 5. Relationship of Reporting Person(s) to Issuer        |  |  |  |
|--|---|---|--|--|--|
| (Last) (First) (Midd                               |   | (Check all applicable)                                  |  |  |  |
|  | (Month/Day/Year)  | Director 10% Owner                                      |  |  |  |
| 2105 CITYWEST                                      | 08/14/2008  | Officer (give titleX Other (specify below)              |  |  |  |
| BOULEVARD, SUITE 400                               |   | Former Director   |  |  |  |
| (Street)   | 4. If Amendment, Date Original  | 6. Individual or Joint/Group Filing(Check               |  |  |  |
|  | Filed(Month/Day/Year)   | Applicable Line) _X_ Form filed by One Reporting Person |  |  |  |
| HOUSTON, TX 77042-2839                             |   | Form filed by More than One Reporting Person            |  |  |  |

| (City)                               | (State)                                 | (Zip) Tal   | ble I - Non-    | Derivative :                 | Securi                       | ties Acquire   | ed, Disposed of, o   | or Beneficially  | <b>Owned</b>  |
|--------------------------------------|---|---|-----------------|------------------------------|------------------------------|----------------|--|--|---|
| 1.Title of<br>Security<br>(Instr. 3) | 2. Transaction Date<br>(Month/Day/Year) | 2A. Deemed<br>Execution Date, if<br>any<br>(Month/Day/Year) | Code (Instr. 8) | onDisposed o<br>(Instr. 3, 4 | f (D)<br>and 5)<br>(A)<br>or |                | 5. Amount of<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s)<br>(Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of<br>Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
| Common<br>Stock                      | 08/14/2008                              |   | Code V M        | Amount 30,000                | (D)                          | Price<br>\$ 10 | 68,949   | D  |   |
| Common<br>Stock                      | 08/14/2008                              |   | M               | 20,000                       | A                            | \$ 7.5625      | 88,949   | D  |   |
| Common<br>Stock                      | 08/14/2008                              |   | M               | 10,000                       | A                            | \$ 5.25        | 98,949   | D  |   |
| Common<br>Stock                      | 08/14/2008                              |   | M               | 10,000                       | A                            | \$ 8.5         | 108,949  | D  |   |
| Common<br>Stock                      | 08/14/2008                              |   | M               | 10,000                       | A                            | \$ 8.45        | 118,949  | D  |   |

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| Common<br>Stock | 08/14/2008 | M | 10,000  | A | \$ 4.35       | 128,949   | D |
|-----------------|------------|---|---------|---|---------------|-----------|---|
| Common<br>Stock | 08/14/2008 | M | 10,000  | A | \$ 4.11       | 1,389,491 | D |
| Common<br>Stock | 08/14/2008 | M | 12,500  | A | \$ 6.75       | 151,449   | D |
| Common<br>Stock | 08/14/2008 | M | 12,500  | A | \$ 7.76       | 163,949   | D |
| Common<br>Stock | 08/14/2008 | S | 125,000 | D | \$<br>16.0153 | 38,949    | D |

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<br>Derivative<br>Security<br>(Instr. 3) | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution Date, if<br>any<br>(Month/Day/Year) | 4.<br>Transactio<br>Code<br>(Instr. 8) | 5. Number of orDerivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                    | 7. Title and Amo<br>Underlying Secur<br>(Instr. 3 and 4) |                        |
|---|---|---|---|--|---|--|--------------------|--|------------------------|
|   |   |   |   | Code V                                 | (A) (D)   | Date<br>Exercisable                                      | Expiration<br>Date | Title  | An<br>or<br>Nu<br>of S |
| Non-employee option (right-to-buy)                  | \$ 10   | 08/14/2008                              |   | M                                      | 30,000  | <u>(1)</u>   | 06/01/2009         | Common<br>Stock  | 30                     |
| Non-employee option (right-to-buy)                  | \$ 7.5625   | 08/14/2008                              |   | M                                      | 20,000  | 05/31/2000   | 06/28/2009         | Common<br>Stock  | 20                     |
| Non-employee option (right-to-buy)                  | \$ 5.25   | 08/14/2008                              |   | M                                      | 10,000  | (2)  | 11/01/2019         | Common<br>Stock  | 10                     |
| Non-employee option (right-to-buy)                  | \$ 8.5  | 08/14/2008                              |   | M                                      | 10,000  | 11/01/2001   | 11/01/2020         | Common<br>Stock  | 10                     |
| Non-employee option (right-to-buy)                  | \$ 8.45   | 08/14/2008                              |   | M                                      | 10,000  | 11/01/2001   | 11/01/2021         | Common<br>Stock  | 10                     |

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| Non-employee option (right-to-buy) | \$ 4.35 | 08/14/2008 | M | 10,000 | 11/01/2002 | 11/01/2022 | Common<br>Stock | 10 |
|------------------------------------|---------|------------|---|--------|------------|------------|-----------------|----|
| Non-employee option (right-to-buy) | \$ 4.11 | 08/14/2008 | M | 10,000 | 11/01/2003 | 11/01/2023 | Common<br>Stock | 10 |
| Non-employee option (right-to-buy) | \$ 6.75 | 08/14/2008 | M | 12,500 | 11/01/2004 | 11/01/2024 | Common<br>Stock | 12 |
| Non-employee option (right-to-buy) | \$ 7.76 | 08/14/2008 | M | 12,500 | 11/01/2005 | 11/01/2025 | Common<br>Stock | 12 |

# **Reporting Owners**

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

SMITH SAM K

2105 CITYWEST BOULEVARD
SUITE 400
Former Director

HOUSTON, TX 77042-2839

# **Signatures**

/s/ Debra A. Addington, attorney-in-fact 08/18/2008

\*\*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) The option vested in three equal annual installments on June 28 of 2000, 2001, and 2002.
- (2) The option vested in equal annual installments on November 1st of 2000 and 2001.

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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