

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

ION Geophysical Corporation

(Name of Issuer)

Common Stock, \$0.01 par value

(Title of Class of Securities)

462044207

(CUSIP Number)

Gates Capital Management, Inc.
1177 Avenue of the Americas, 46th Floor
New York, New York 10036

with a copy to:

Eleazer Klein, Esq.

Adriana Schwartz, Esq.

Schulte Roth & Zabel LLP

919 Third Avenue

New York, New York 10022

(212) 756-2000

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

April 20, 2021

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), Rule 13d-1(f) or Rule 13d-1(g), check the following box.

(Page 1 of 12 Pages)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1	NAME OF REPORTING PERSON GATES CAPITAL MANAGEMENT, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 4,713,354 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 4,713,354 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 4,713,354 shares of Common Stock	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 16.4%	
14	TYPE OF REPORTING PERSON IA, PN	

1	NAME OF REPORTING PERSON GATES CAPITAL MANAGEMENT GP, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 4,713,354 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 4,713,354 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 4,713,354 shares of Common Stock	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 16.4%	
14	TYPE OF REPORTING PERSON OO	

1	NAME OF REPORTING PERSON GATES CAPITAL MANAGEMENT, INC.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 4,713,354 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 4,713,354 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 4,713,354 shares of Common Stock	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 16.4%	
14	TYPE OF REPORTING PERSON CO, HC	

1	NAME OF REPORTING PERSON JEFFREY L. GATES	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 4,713,354 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 4,713,354 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 4,713,354 shares of Common Stock	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 16.4%	
14	TYPE OF REPORTING PERSON IN	

Item 1. SECURITY AND ISSUER

This statement relates to the shares of common stock, \$0.01 par value (the "Common Stock"), of ION Geophysical Corporation, a Delaware corporation (the "Issuer"). The Issuer's principal executive offices are located at 2105 City West Blvd., Suite 100, Houston, Texas 77042-2855.

Item 2. IDENTITY AND BACKGROUND

(a) This Schedule 13D is filed by each of the entities and persons listed below, all of whom together are referred to herein as the "Reporting Persons":

(i) Gates Capital Management, L.P., a Delaware limited partnership ("Gates Capital"), with respect to the shares of Common Stock held by ECF Value Fund, L.P., a Delaware limited partnership ("ECF I"), ECF Value Fund II, L.P., a Delaware limited partnership ("ECF II"), and ECF Value Fund International Master, L.P., a limited partnership formed under the laws of the British Virgin Islands ("ECF INTL"), as to which Gates Capital serves as investment manager (collectively, the "Gates Capital Funds");

(ii) Gates Capital Management GP, LLC, a Delaware limited liability company (the "General Partner"), which is the general partner of Gates Capital, with respect to the shares of Common Stock directly held by the Gates Capital Funds;

(iii) Gates Capital Management, Inc., a Delaware corporation (the "Corporation"), is the managing member of the General Partner, with respect to the shares of Common Stock directly held by the Gates Capital Funds; and

(iv) Jeffrey L. Gates, a United States citizen, who serves as the President of the Corporation, with respect to the shares of Common Stock directly held by the Gates Capital Funds.

Set forth in the attached Annex A and incorporated herein by reference is a listing of the directors, general partners, managing members and controlling persons of the Reporting Persons (collectively, the "Covered Persons"), and sets forth the principal occupation, citizenship and principal place of business of each Covered Person.

(b) The business address of each of Gates Capital, the General Partner, the Corporation, Mr. Gates, ECF I and ECF II is c/o Gates Capital Management, Inc., 1177 Avenue of the Americas, 46th Floor, New York, New York 10036. The business address of ECF INTL is ECF Value Fund International, Ltd., c/o Harneys Westwood & Riegels, Craigmuir Chambers, P.O. Box 71, Road Town, Tortola, British Virgin Islands.

(c) The principal business of Gates Capital is to serve as investment manager to the Gates Capital Funds. The principal business of the General Partner is to serve as the general partner to Gates Capital. The principal business of the Corporation is the performance of investment management and advisory services. The principal business of Mr. Gates is to serve as the President of Gates Capital.

(d) During the last five years, none of the Reporting Persons, or, to the best of their knowledge, the Covered Persons, have been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) None of the Reporting Persons, during the last five years, have been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree, or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Gates Capital is a Delaware limited partnership, the General Partner is a Delaware limited liability company, and the Corporation is a Delaware corporation. ECF I and ECF II are organized under the laws of Delaware. ECF INTL is organized under the laws of the British Virgin Islands. Mr. Gates is a United States citizen. The citizenship of each Covered Person is set forth on Annex A and incorporated herein by reference.

Item 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION

The Gates Capital Funds acquired the shares of Common Stock reported in this Schedule 13D pursuant to the Exchange Offer and concurrent Rights Offering (including through the Backstop) (each as defined in Item 4), as more fully described in Item 4. The aggregate cost to acquire the shares of Common Stock held by the Gates Capital Funds was approximately \$12,111,500 based on a deal price of \$2.57 per share.

Item 4. PURPOSE OF TRANSACTION

On December 23, 2020, the Gates Capital Funds entered into a Restructuring Support Agreement (the "Restructuring Support Agreement"), dated as of December 23, 2020, by and between the Issuer and certain holders of the Issuer's outstanding 9.125% Senior Secured Priority Notes due 2021 (the "Old Second Lien Notes"). Under the terms of the Restructuring Support Agreement, the Issuer agreed to commence an offer for the holders of the Issuer's outstanding Old Second Lien Notes to exchange such notes (the "Exchange Offer") for a combination of New Second Lien Convertible Notes (the "New Second Lien Convertible Notes") and cash and, at the Issuer's option, either cash, Common Stock, or additional New Second Lien Convertible Notes. The Exchange Offer is more fully described in the Issuer's Prospectus related thereto dated as of March 10, 2021, filed under cover of Form 424B3 on March 10, 2021 (the "Exchange Offer Prospectus"). Concurrently with the Exchange Offer, the Issuer granted the right to all holders of Common Stock to participate in a rights offering (the "Rights Offering") to subscribe for their pro rata share of up to \$50 million of New Second Lien Convertible Notes issued at par or shares of Common Stock issued at \$2.57 per share. The Rights Offering is more fully described in the Issuer's Prospectus related thereto dated as of March 10, 2021, filed under cover of Form 424B3 on March 10, 2021 (the "Rights Offering Prospectus"). The foregoing summaries of the Exchange Offer and Rights Offering do not purport to be complete and are qualified in their entirety by the Exchange Offer Prospectus and the Rights Offering Prospectus.

In connection with the Restructuring Support Agreement, on March 17, 2021, the Gates Capital Funds entered into a Backstop Agreement, pursuant to which the Gates Capital Funds agreed to serve as a backstop party for the Rights Offering (the "Backstop Agreement"). The Backstop Agreement was subject to customary terms and conditions, including payment, in principal amount of New Second Lien Convertible Notes or Common Stock at \$2.57 per share of a backstop fee in an amount up to 5% of the backstop commitment under the Backstop Agreement.

On April 20, 2021, the Issuer completed its Exchange Offer and the concurrent Rights Offering. As part of the transactions undertaken pursuant to the Exchange Offer and Rights Offering (including the Backstop Agreement), the Gates Capital Funds received an aggregate of 4,713,354 shares of Common Stock and \$70,479,000 in aggregate principal amount of New Second Lien Convertible Notes.

The New Second Lien Convertible Notes are governed by the Indenture (the "Indenture"), dated as of April 20, 2021, among the Issuer, certain of the Issuer's subsidiaries, as guarantors, and UMB Bank, National Association, as trustee and collateral agent ("Trustee").

The New Second Lien Convertible Notes are senior secured second-priority debt obligations of the Issuer and will mature on December 15, 2025. The New Second Lien Convertible Notes will bear interest at a rate of 8.00% per annum. Interest on the New Second Lien Convertible Notes will be payable on June 15 and December 15 of each year, commencing on June 15, 2021.

Holders of the New Second Lien Convertible Notes may convert all or any portion of their New Second Lien Convertible Notes at their option at any time prior to the close of business on the business day immediately preceding the maturity date. The conversion rate will initially be 333 shares of Common Stock per \$1,000 principal amount of New Second Lien Convertible Notes (equivalent to an initial conversion price of approximately \$3.00 per share of Common Stock) and is subject to adjustment as described in the Indenture. Upon conversion of a New Second Lien Convertible Note, the Issuer may satisfy its conversion obligation by paying or delivering, as the case may be, cash, shares of its Common Stock or a combination of cash and shares of Common Stock, at the Issuer's election. Accordingly, the Reporting Persons do not beneficially own any shares of Common Stock that may be issued upon conversion of the New Second Lien Convertible Notes at this time.

One share of Series A Preferred Stock (the "Series A Preferred Stock") was issued to the Trustee of the New Second Lien Convertible Notes to (i) provide certain rights and protections to holders of the New Second Lien Convertible Notes and (ii) allow, under certain circumstances, the holders of New Second Lien Convertible Notes to vote on an "as-converted" basis. The New Second Lien Convertible Notes Trustee shall take direction from holders of 50.1% of the New Second Lien Convertible Notes for any action requiring the consent of the holder of the Series A Preferred Stock or each act on which the holder of the Series A Preferred Stock is entitled to vote.

Following a default or event of default under the Indenture, the Series A Preferred Stock will be entitled to vote with the Common Stock of the Issuer as a single class and having voting power equal to the number of shares of Common Stock issuable upon the conversion of the New Second Lien Convertible Notes. In addition, at all times when the Common Stock is entitled to vote, the Series A Preferred Stock will be entitled to vote with the Common Stock as a single class and having voting powers equal to the number of shares of Common Stock issuable upon the conversion of the New Second Lien Convertible Notes for any transaction (a) modifying, amending, supplementing, or waiving any provision of the Issuer's organizational documents or (b) entering into any merger, consolidation, sale of all or substantially all of the Issuer's assets, or other business combination transactions. The holder of the Series A Preferred Stock will have the right to appoint two (2) directors to Issuers board of directors, both of whom must be independent.

The foregoing description of the Indenture and terms of the New Second Lien Convertible Notes does not purport to be complete and is qualified in its entirety by reference to the Indenture which is attached as Exhibit 4.1 to the Current Report on Form 8-K filed by the Issuer on April 22, 2021.

Except as set forth herein, the Reporting Persons have no present plan or proposal that would relate to or result in any of the matters set forth in subparagraphs (a) - (j) of Item 4 of Schedule 13D. Nevertheless, the Reporting Persons may have discussions with officers and directors of the Issuer in connection with the Reporting Persons' investment in the Issuer. The topics of these conversations may cover a range of issues, including those relating to the business of the Issuer, management, board composition, investor communications, operations, capital allocation, dividend policy, financial condition, mergers and acquisitions strategy, overall business strategy, executive compensation, corporate governance and environmental and social matters related to the Issuer's business and stakeholders. The Reporting Persons may also have similar conversations with other stockholders or other interested parties, such as industry analysts, existing or potential strategic partners or competitors, investment professionals and other investors and may exchange information with any such persons or the Issuer pursuant to appropriate confidentiality or similar agreements (which may contain customary standstill provisions). The Reporting Persons may at any time reconsider and change their intentions relating to the foregoing.

The Reporting Persons intend to review their investment in the Issuer on a continuing basis and depending upon various factors, including without limitation, the Issuer's financial position and strategic direction, the outcome of any discussions referenced above, overall market conditions, other investment opportunities available to them, and the availability of securities of the Issuer at prices that would make the purchase or sale of such securities desirable, may endeavor (i) to increase or decrease the Gates Capital Funds' positions in the Issuer through, among other things, the purchase or sale of the shares of Common Stock or New Second Lien Convertible Notes and/or other equity, debt, derivative securities or other instruments that are convertible into such securities, or are based upon or relate to the value of such securities or the Issuer (collectively, "Securities") on the open market or in private transactions, including through a trading plan created under Rule 10b5-1(c) or otherwise, on such terms and at such times as the Reporting Persons may deem advisable and/or (ii) to enter into transactions that increase or hedge its economic exposure to the shares of Common Stock, New Second Lien Convertible Notes or other Securities without affecting the Reporting Person's beneficial ownership of the Common Stock, New Second Lien Convertible Notes or other Securities. In addition, the Reporting Persons may, at any time and from time to time, (i) review or reconsider their position and/or change their purposes and/or formulate plans or proposals with respect thereto and (ii) propose or consider one or more of the actions described in subparagraphs (a) - (j) of Item 4 of Schedule 13D.

Item 5. INTEREST IN SECURITIES OF THE ISSUER

(a) See rows (11) and (13) of the cover pages to this Schedule 13D for the aggregate number of Shares and percentages of the Shares beneficially owned by each Reporting Person. The percentages used in this Schedule 13D are calculated based upon 28,811,207 shares of Common Stock outstanding as of the April 20, 2021, as reported in the Issuer's Form 8-K filed by the Issuer with the Securities and Exchange Commission (the "SEC") on April 22, 2021.

(b) See rows (7) through (10) of the cover pages to this Schedule 13D for the number of Shares as to which each Reporting Person has the sole or shared power to vote or direct the vote and sole or shared power to dispose or to direct the disposition.

(c) Other than as disclosed in Item 4, no transactions in the shares of Common Stock have been effected by the Reporting Persons during the past sixty (60) days.

(d) The Gates Capital Funds have the right to receive, or the power to direct the receipt of dividends from, or proceeds from the sale of, the shares of Common Stock reported herein.

(e) Not applicable.

**Item 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO
SECURITIES OF THE ISSUER**

The Reporting Persons are parties to an agreement with respect to the joint filing of this Schedule 13D and any amendments thereto. A copy of such agreement is attached as Exhibit 1 to this Schedule 13D and is incorporated by reference herein.

In addition, the Gates Capital Funds hold an aggregate of \$70,479,000 in principal amount of the New Second Lien Convertible Notes described in Item 4, which represents approximately 61% of the outstanding principal amount of the New Second Lien Convertible Notes.

Except as set forth herein, there are no contracts, arrangements, understandings or relationships among the Reporting Persons or between the Reporting Persons and any other person with respect to the Common Stock.

Item 7. EXHIBITS

<u>Exhibit</u>	<u>Description</u>
1	Joint Filing Agreement, dated April 30, 2021.

SIGNATURES

After reasonable inquiry and to the best of his or its knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Date: April 30, 2021

Gates Capital Management, L.P.

By: Gates Capital Management GP, LLC, its general partner

By: Gates Capital Management, Inc., its managing member

By: /s/ Jeffrey L. Gates
Jeffrey L. Gates
President

Gates Capital Management GP, LLC

By: Gates Capital Management, Inc., its managing member

By: /s/ Jeffrey L. Gates
Jeffrey L. Gates
President

Gates Capital Management, Inc.

By: /s/ Jeffrey L. Gates
Jeffrey L. Gates
President

By: /s/ Jeffrey L. Gates
Jeffrey L. Gates

MANAGERS AND GENERAL PARTNERS OF THE REPORTING PERSONS

The following sets forth the name, principal occupation, citizenship or jurisdiction of organization and principal place of business of the directors, general partners, managing members or controlling persons (the "Covered Persons") of the Reporting Persons:

Gates Capital Management, L.P.

<i>Name</i>	<i>Title or Relationship with Reporting Person</i>	<i>Principal Occupation or Employment</i>	<i>Citizenship or Jurisdiction of Organization</i>	<i>Principal Place of Business</i>
Gates Capital Management GP, LLC	General Partner	Investment Management	Delaware	(1)

Gates Capital Management GP, LLC

<i>Name</i>	<i>Title or Relationship with Reporting Person</i>	<i>Principal Occupation or Employment</i>	<i>Citizenship or Jurisdiction of Organization</i>	<i>Principal Place of Business</i>
Gates Capital Management, Inc.	Managing Member	Investment Management	Delaware	(1)

Gates Capital Management, Inc.

<i>Name</i>	<i>Title or Relationship with Fund</i>	<i>Principal Occupation or Employment</i>	<i>Citizenship or Jurisdiction of Organization</i>	<i>Principal Place of Business</i>
Jeffrey L. Gates	President	Investment Management	United States	(1)

(1) The address of the principal place of business of each of the Covered Persons is c/o Gates Capital Management, Inc., 1177 Avenue of the Americas, 46th Floor, New York, New York 10036.

**JOINT FILING AGREEMENT
PURSUANT TO RULE 13d-1(k)**

The undersigned acknowledge and agree that the foregoing statement on Schedule 13D is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13D shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing agreements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him or it contained herein and therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that he or it knows or has reason to believe that such information is inaccurate.

DATE: April 30, 2021

Gates Capital Management, L.P.

By: Gates Capital Management GP, LLC, its general partner

By: Gates Capital Management, Inc., its managing member

By: /s/ Jeffrey L. Gates

Jeffrey L. Gates

President

Gates Capital Management GP, LLC

By: Gates Capital Management, Inc., its managing member

By: /s/ Jeffrey L. Gates

Jeffrey L. Gates

President

Gates Capital Management, Inc.

By: /s/ Jeffrey L. Gates

Jeffrey L. Gates

President

By: /s/ Jeffrey L. Gates

Jeffrey L. Gates