

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934
(Amendment No. 1)*

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)

September 16, 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 8 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 3,301,103 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 3,301,103 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 3,301,103 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) 11.1%	
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 3,301,103 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 3,301,103 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 3,301,103 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) 11.1%	
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 3,301,103 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 3,301,103 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 3,301,103 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) 11.1%	
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 3,301,103 shares of Common Stock
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 3,301,103 shares of Common Stock
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 3,301,103 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) 11.1%	
14	TYPE OF REPORTING PERSON IN	

This Amendment No. 1 to Schedule 13D ("Amendment No. 1") amends and supplements the Schedule 13D originally filed on April 30, 2021 (the "Original 13D," together with this Amendment No. 1, the "Schedule 13D"), and relates to the common stock, par value \$0.01 per share, (the "Common Stock"), of ION Geophysical Corporation, a Delaware corporation (the "Issuer"). The address of the principal executive office of the Issuer is 2105 City West Blvd., Suite 100, Houston, Texas 77042-2855.

Capitalized terms used herein and not otherwise defined in this Amendment No. 1 have the meanings set forth in the Schedule 13D. This Amendment No. 1 amends Item 5 as set forth below.

Item 5. INTEREST IN SECURITIES OF THE ISSUER

Items 5(a)-(c) of the Schedule 13D are hereby amended and restated as follows:

(a) See rows (11) and (13) of the cover pages to this Schedule 13D for the aggregate number of shares of Common Stock and percentages of the shares of Common Stock beneficially owned by each Reporting Person. The percentages used in this Schedule 13D are calculated based upon 29,637,478 shares of Common Stock outstanding as of the August 9, 2021, as reported in the Issuer's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2021, filed by the Issuer with the Securities and Exchange Commission (the "SEC") on August 12, 2021.

(b) See rows (7) through (10) of the cover pages to this Schedule 13D for the number of shares of Common Stock 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) Information concerning transactions in the shares of Common Stock effected by the Reporting Persons during the past sixty (60) days is set forth in Annex A hereto and is incorporated by reference herein.

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: September 20, 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

TRANSACTIONS IN COMMON STOCK BY THE REPORTING PERSONS

The following table sets forth all transactions in the Common Stock effected by the Reporting Persons in the past sixty (60) days. Unless otherwise noted, all such transactions were effected in the open market through a broker and all prices per share include commissions. Where a price range is provided in the column titled "Price Range (\$)", the price reported in the column titled "Price Per Share (\$)" is a weighted average price. These shares of Common Stock were sold in multiple transactions at prices between the price ranges indicated in the column titled "Price Range (\$)". The Reporting Persons will undertake to provide to the staff of the SEC, upon request, full information regarding the number of shares of Common Stock sold at each separate price.

Gates Capital Funds

Trade Date	Shares Purchased (Sold)	Price Per Share (\$)	Price Range (\$)
09/16/2021	(968,747)	1.63	1.51 – 1.79
09/17/2021	(241,084)	1.45	1.43 – 1.47
09/20/2021	(202,420)	1.34	1.32 – 1.36