

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

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**FORM 10-Q**

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**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2017**

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**COMMISSION FILE NUMBER: 1-12691**

**ION GEOPHYSICAL CORPORATION**

**(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)**

**DELAWARE**  
(State or other jurisdiction of  
incorporation or organization)

**22-2286646**  
(I.R.S. Employer  
Identification No.)

**2105 CityWest Blvd.**  
**Suite 100**  
**Houston, Texas**  
(Address of principal executive offices)

**77042-2839**  
(Zip Code)

**REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (281) 933-3339**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).  
Yes  No

At October 31, 2017, there were 11,896,190 shares of common stock, par value \$0.01 per share, outstanding.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
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FOR THE QUARTER ENDED SEPTEMBER 30, 2017

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**PART I. FINANCIAL INFORMATION**  
**Item 1. Financial Statements**

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
CONDENSED CONSOLIDATED BALANCE SHEETS  
(UNAUDITED)

	September 30, 2017	December 31, 2016
	(In thousands, except share data)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 40,225	\$ 52,652
Accounts receivable, net	39,374	20,770
Unbilled receivables	25,833	13,415
Inventories	14,264	15,241
Prepaid expenses and other current assets	4,259	9,559
Total current assets	123,955	111,637
Property, plant, equipment and seismic rental equipment, net	55,188	67,488
Multi-client data library, net	96,751	105,935
Goodwill	24,048	22,208
Intangible assets, net	2,026	3,103
Other assets	1,485	2,845
Total assets	\$ 303,453	\$ 313,216
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Current maturities of long-term debt	\$ 38,819	\$ 14,581
Accounts payable	24,674	26,889
Accrued expenses	40,874	26,240
Accrued multi-client data library royalties	24,576	23,663
Deferred revenue	10,875	3,709
Total current liabilities	139,818	95,082
Long-term debt, net of current maturities	116,506	144,209
Other long-term liabilities	17,066	20,527
Total liabilities	273,390	259,818
Equity:		
Common stock, \$0.01 par value; authorized 26,666,667 shares; outstanding 11,896,190 and 11,792,447 shares at September 30, 2017 and December 31, 2016, respectively	119	118
Additional paid-in capital	901,138	899,198
Accumulated deficit	(853,527)	(824,679)
Accumulated other comprehensive loss	(18,999)	(21,748)
Total stockholders' equity	28,731	52,889
Noncontrolling interest	1,332	509
Total equity	30,063	53,398
Total liabilities and equity	\$ 303,453	\$ 313,216

See accompanying Footnotes to Unaudited Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS  
(UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
	(In thousands, except per share data)			
Service revenues	\$ 52,615	\$ 65,914	\$ 110,897	\$ 104,500
Product revenues	8,480	12,708	28,755	32,939
Total net revenues	61,095	78,622	139,652	137,439
Cost of services	26,392	40,694	73,518	93,706
Cost of products	4,594	6,163	14,306	16,045
Gross profit	30,109	31,765	51,828	27,688
Operating expenses:				
Research, development and engineering	4,396	4,231	11,998	14,601
Marketing and sales	5,645	4,680	15,062	13,374
General, administrative and other operating expenses	10,132	10,990	32,316	34,566
Total operating expenses	20,173	19,901	59,376	62,541
Income (loss) from operations	9,936	11,864	(7,548)	(34,853)
Interest expense, net	(3,959)	(4,607)	(12,664)	(14,043)
Other income (expense), net	722	(2,027)	(4,154)	(3,624)
Income (loss) before income taxes	6,699	5,230	(24,366)	(52,520)
Income tax expense	1,686	3,316	3,670	5,865
Net income (loss)	5,013	1,914	(28,036)	(58,385)
Net income attributable to noncontrolling interests	(78)	(215)	(812)	(272)
Net income (loss) attributable to ION	\$ 4,935	\$ 1,699	\$ (28,848)	\$ (58,657)
Net income (loss) per share:				
Basic	\$ 0.42	\$ 0.14	\$ (2.43)	\$ (5.21)
Diluted	\$ 0.41	\$ 0.14	\$ (2.43)	\$ (5.21)
Weighted average number of common shares outstanding				
Basic	11,890	11,786	11,862	11,269
Diluted	12,071	11,907	11,862	11,269

See accompanying Footnotes to Unaudited Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)  
(UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
	(In thousands)			
Net income (loss)	\$ 5,013	\$ 1,914	\$ (28,036)	\$ (58,385)
Other comprehensive loss, net of taxes, as appropriate:				
Foreign currency translation adjustments	1,033	(1,083)	2,749	(5,282)
Comprehensive net income (loss)	6,046	831	(25,287)	(63,667)
Comprehensive (income) attributable to noncontrolling interest	(78)	(215)	(812)	(272)
Comprehensive net income (loss) attributable to ION	<u>\$ 5,968</u>	<u>\$ 616</u>	<u>\$ (26,099)</u>	<u>\$ (63,939)</u>

See accompanying Footnotes to Unaudited Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS  
(UNAUDITED)

	Nine Months Ended September 30,	
	2017	2016
	(In thousands)	
Cash flows from operating activities:		
Net loss	\$ (28,036)	\$ (58,385)
Adjustments to reconcile net loss to cash provided by operating activities:		
Depreciation and amortization (other than multi-client data library)	13,199	17,024
Amortization of multi-client data library	34,245	23,161
Stock-based compensation expense	1,694	2,512
Accrual for loss contingency related to legal proceedings	5,000	—
Loss on extinguishment of debt	—	2,182
Deferred income taxes	(900)	1,031
Change in operating assets and liabilities:		
Accounts receivable	(18,200)	9,325
Unbilled receivables	(12,398)	(3,711)
Inventories	831	2,374
Accounts payable, accrued expenses and accrued royalties	1,011	3,381
Deferred revenue	7,092	(2,103)
Other assets and liabilities	6,480	6,441
Net cash provided by operating activities	<u>10,018</u>	<u>3,232</u>
Cash flows from investing activities:		
Cash invested in multi-client data library	(16,576)	(11,601)
Purchase of property, plant, equipment and seismic rental assets	(1,021)	(567)
Net cash used in investing activities	<u>(17,597)</u>	<u>(12,168)</u>
Cash flows from financing activities:		
Borrowings under revolving line of credit	—	15,000
Payments on notes payable and long-term debt	(4,320)	(6,726)
Costs associated with issuance of debt	—	(6,638)
Payment to repurchase bonds	—	(15,000)
Repurchase of common stock	—	(964)
Costs associated with issuance of equity	(123)	—
Other financing activities	(134)	13
Net cash used in financing activities	<u>(4,577)</u>	<u>(14,315)</u>
Effect of change in foreign currency exchange rates on cash and cash equivalents	(271)	854
Net decrease in cash and cash equivalents	(12,427)	(22,397)
Cash and cash equivalents at beginning of period	52,652	84,933
Cash and cash equivalents at end of period	<u>\$ 40,225</u>	<u>\$ 62,536</u>

See accompanying Footnotes to Unaudited Condensed Consolidated Financial Statements.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**FOOTNOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Basis of Presentation**

The condensed consolidated balance sheet of ION Geophysical Corporation and its subsidiaries (collectively referred to as the “Company” or “ION,” unless the context otherwise requires) at December 31, 2016 has been derived from the Company’s audited consolidated financial statements at that date. The condensed consolidated balance sheet at September 30, 2017, and the condensed consolidated statements of operations and comprehensive income (loss) for the three and nine months ended September 30, 2017 and 2016 and the condensed consolidated statements of cash flows for the nine months ended September 30, 2017 and 2016, are unaudited. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. The results of operations for the three and nine months ended September 30, 2017, are not necessarily indicative of the operating results for a full year or of future operations.

The Company has non-redeemable noncontrolling interests in majority-owned affiliates which are reported as a separate component of equity in “Noncontrolling interests” in the condensed consolidated balance sheets. The activity for this noncontrolling interest relates to proprietary processing projects in Brazil.

These condensed consolidated financial statements have been prepared using accounting principles generally accepted in the United States for interim financial information and the instructions to Form 10-Q and applicable rules of Regulation S-X of the Securities and Exchange Commission (the “SEC”). Certain information and footnote disclosures normally included in annual financial statements presented in accordance with accounting principles generally accepted in the United States have been omitted. The accompanying condensed consolidated financial statements should be read in conjunction with the Company’s Annual Report on Form 10-K for the year ended December 31, 2016.

**(2) Segment Information**

The Company evaluates and reviews its results based on three business segments: E&P Technology & Services, E&P Operations Optimization, and Ocean Bottom Seismic Services. The Company measures segment operating results based on income (loss) from operations.

The following table is a summary of segment information (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net revenues:				
E&P Technology & Services:				
New Venture	\$ 43,542	\$ 8,393	\$ 70,477	\$ 16,278
Data Library	5,044	21,510	25,360	32,057
Total multi-client revenues	48,586	29,903	95,837	48,335
Imaging Services	3,468	6,134	13,409	19,338
Total	52,054	36,037	109,246	67,673
E&P Operations Optimization:				
Devices	5,260	8,679	17,929	20,664
Optimization Software & Services	3,781	3,922	12,477	12,685
Total	9,041	12,601	30,406	33,349
Ocean Bottom Seismic Services	—	29,984	—	36,417
Total	\$ 61,095	\$ 78,622	\$ 139,652	\$ 137,439
Gross profit (loss):				
E&P Technology & Services	\$ 28,533	\$ 12,888	\$ 44,464	\$ (418)
E&P Operations Optimization	4,055	6,866	15,100	16,647
Ocean Bottom Seismic Services	(2,479)	12,011	(7,736)	11,459
Total	\$ 30,109	\$ 31,765	\$ 51,828	\$ 27,688
Gross margin:				
E&P Technology & Services	55%	36%	41%	(1)%
E&P Operations Optimization	45%	54%	50%	50 %
Ocean Bottom Seismic Services	—%	40%	—%	31 %
Total	49%	40%	37%	20 %
Income (loss) from operations:				
E&P Technology & Services	\$ 22,695	\$ 7,259	\$ 27,952	\$ (16,867)
E&P Operations Optimization	998	3,682	5,569	7,162
Ocean Bottom Seismic Services	(4,432)	9,320	(12,300)	2,053
Support and other	(9,325)	(8,397)	(28,769)	(27,201)
Income (loss) from operations	9,936	11,864	(7,548)	(34,853)
Interest expense, net	(3,959)	(4,607)	(12,664)	(14,043)
Other income (expense), net	722	(2,027)	(4,154)	(3,624)
Income (loss) before income taxes	\$ 6,699	\$ 5,230	\$ (24,366)	\$ (52,520)

### (3) Long-term Debt

The following table is a summary of long-term debt obligations, net (in thousands):

Obligations (in thousands)	September 30, 2017	December 31, 2016
Senior secured second-priority lien notes (maturing December 15, 2021)	\$ 120,569	\$ 120,569
Senior secured third-priority lien notes (maturing May 15, 2018)	28,497	28,497
Revolving line of credit (maturing August 22, 2019)	10,000	10,000
Equipment capital leases	542	3,446
Other debt	—	1,415
Costs associated with issuances of debt <sup>(1)</sup>	(4,283)	(5,137)
Total	155,325	158,790
Current portion of long-term debt and lease obligations <sup>(2)</sup>	(38,819)	(14,581)
Non-current portion of long-term debt and lease obligations	\$ 116,506	\$ 144,209



- (1) Represents debt issuance costs presented as a direct deduction from the carrying amount of the debt liability associated with the Senior secured second-priority and Senior secured third-priority lien notes. These amounts do not include \$0.4 million and \$1.2 million of debt issuance costs associated with the Revolving Credit Facility as of September 30, 2017 and December 31, 2016 respectively, which are included within other assets on the balance sheet.
- (2) Includes \$28.5 million Senior secured third-priority lien notes reclassified from long-term to current during the second quarter 2017.

### ***Revolving Credit Facility***

In August 2014, ION and its material U.S. subsidiaries, GX Technology Corporation, ION Exploration Products (U.S.A.), Inc., and I/O Marine Systems, Inc. (collectively, the “Subsidiary Borrowers”, and together with ION collectively, the “Borrowers”) entered into a Revolving Credit and Security Agreement with PNC Bank, National Association (“PNC”), as agent (the “Original Credit Agreement”), which was amended by the First Amendment to Revolving Credit and Security Agreement in August 2015 (the “First Amendment”) and the Second Amendment (as defined below) (the Original Credit Agreement, as amended by the First Amendment, and the Second Amendment, the “Credit Facility”). For a complete discussion of the terms, available credit and security of this Credit Facility, prior to the effectiveness of the Second Amendment, see Footnote 4 to the Financial Statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2016.

The Credit Facility is available to provide for the Borrowers’ general corporate needs, including working capital requirements, capital expenditures, surety deposits and acquisition financing. The maximum amount of the revolving line of credit under the Credit Facility is the lesser of \$40.0 million or a monthly borrowing base.

On April 28, 2016, the Borrowers and PNC entered into a second amendment (the “Second Amendment”) to the Credit Facility. The Second Amendment, among other things:

- increased the applicable margin for loans by 0.50% per annum (from 2.50% per annum to 3.00% per annum for alternate base rate loans and from 3.50% per annum to 4.00% per annum for LIBOR-based loans);
- increased the minimum excess availability threshold to avoid triggering the agent’s rights to exercise dominion over cash and deposit accounts and increases certain of the thresholds upon which such dominion ceases;
- increased the minimum liquidity threshold to avoid triggering the Company’s obligation to calculate and comply with the existing fixed charge coverage ratio and increased certain of the thresholds upon which such required calculation and compliance cease;
- establish a reserve that will reduce the amount available to be borrowed by the aggregate amount owing under all Third Lien Notes that remain outstanding (if any) on or after February 14, 2018 (i.e., 90 days prior to the stated maturity of the Third Lien Notes);
- increased the maximum amount of certain permitted junior indebtedness to \$200.0 million (from \$175.0 million);
- incorporated technical and conforming changes to reflect that the Second Lien Notes and the remaining Third Lien Notes (and any permitted refinancing thereof or subsequently incurred replacement indebtedness meeting certain requirements) constitute permitted indebtedness;
- clarified the circumstances and mechanics under which the Company may prepay, repurchase or redeem the Second Lien Notes, the remaining Third Lien Notes and certain other junior indebtedness;
- modified the cross-default provisions to incorporated defaults under the Second Lien Notes, the remaining Third Lien Notes and certain other junior indebtedness; and
- eliminated the potential early commitment termination date and early maturity date that would otherwise have occurred ninety (90) days prior to the maturity date of the Third Lien Notes if any of the Third Lien Notes then remained outstanding.

The borrowing base under the Credit Facility will increase or decrease monthly using a formula based on certain eligible receivables, eligible inventory and other amounts, including a percentage of the net orderly liquidation value of the Borrowers’ multi-client library (not to exceed \$15.0 million for the multi-client data library data component). As of September 30, 2017, the borrowing base under the Credit Facility was \$22.1 million, and there was \$10.0 million of indebtedness under the Credit Facility. Even though the Company experienced a significant increase in its accounts and unbilled receivables, those increases were part of the Company’s foreign operations which are not included in the borrowing base calculation. The Credit Facility is scheduled to mature on August 22, 2019.

The obligations of Borrowers under the Credit Facility are secured by a first-priority security interest in 100% of the stock of the Subsidiary Borrowers and 65% of the equity interest in ION International Holdings L.P. and by substantially all other assets of the Borrowers.

The Credit Facility contains covenants that, among other things, limit or prohibit the Borrowers, subject to certain exceptions and qualifications, from incurring additional indebtedness (including capital lease obligations), repurchasing equity, paying dividends or distributions, granting or incurring additional liens on the Borrowers' properties, pledging shares of the Borrowers' subsidiaries, entering into certain merger transactions, entering into transactions with the Company's affiliates, making certain sales or other dispositions of the Borrowers' assets, making certain investments, acquiring other businesses and entering into sale-leaseback transactions with respect to the Borrowers' property.

The Credit Facility requires that ION and the Subsidiary Borrowers maintain a minimum fixed charge coverage ratio of 1.1 to 1.0 as of the end of each fiscal quarter during the existence of a covenant testing trigger event. The fixed charge coverage ratio is defined as the ratio of (i) ION's EBITDA, minus unfunded capital expenditures made during the relevant period, minus distributions (including tax distributions) and dividends made during the relevant period, minus cash taxes paid during the relevant period, to (ii) certain debt payments made during the relevant period. A covenant testing trigger event occurs upon (a) the occurrence and continuance of an event of default under the Credit Facility or (b) the failure to maintain a measure of liquidity greater than (i) \$7.5 million for five consecutive business days or (ii) \$6.5 million on any given business day. Liquidity, as defined in the Credit Facility, is the Company's excess availability to borrow (\$12.1 million at September 30, 2017) plus the aggregate amount of unrestricted cash held by ION, the Subsidiary Borrowers and their domestic subsidiaries. At September 30, 2017, ION, the Subsidiary Borrowers and their domestic subsidiaries had unrestricted cash totaling \$17.2 million and non-domestic subsidiaries had unrestricted cash totaling \$23.0 million.

At September 30, 2017, the Company was in compliance with all of the covenants under the Credit Facility.

The Credit Facility contains customary event of default provisions (including a "change of control" event affecting ION), the occurrence of which could lead to an acceleration of the Company's obligations under the Credit Facility as amended.

#### ***Senior Secured Notes***

In May 2013, the Company sold \$175.0 million aggregate principal amount of 8.125% Senior Secured Second-Priority Notes due 2018 (the "Third Lien Notes") in a private offering pursuant to an Indenture dated as of May 13, 2013 (the "Third Lien Notes Indenture"). On April 28, 2016, the Company successfully completed an exchange offer (the "Exchange Offer") and consent solicitation (the "Consent Solicitation") related to the Third Lien Notes. For a complete discussion of the terms of the Exchange Offer and Consent Solicitation, see Footnote 4 to the Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016. Prior to the completion of the Exchange Offer and Consent Solicitation the Third Lien Notes were senior secured second-priority obligations of the Company. After giving effect to the Exchange Offer and Consent Solicitation, the remaining aggregate principal amount of approximately \$28.5 million of outstanding Third Lien Notes became senior secured third-priority obligations of the Company subordinated to the liens securing all senior and second priority indebtedness of the Company, including under the Credit Facility and Second-Priority Lien Notes (defined below).

Pursuant to the Exchange Offer and Consent Solicitation, the Company (i) issued approximately \$120.6 million in aggregate principal amount of the Company's new 9.125% Senior Secured Second Priority Notes due 2021 (the "Second Lien Notes," and collectively with the Third Lien Notes, the "Notes") and 1,205,477 shares of the Company's common stock in exchange for approximately \$120.6 million in aggregate principal amount of Third Lien Notes, and (ii) purchased approximately \$25.9 million in aggregate principal amount of Third Lien Notes in exchange for aggregate cash consideration totaling approximately \$15.0 million, plus accrued and unpaid interest on the Third Lien Notes from the applicable last interest payment date to, but not including, April 28, 2016.

After giving effect to the Exchange Offer and Consent Solicitation, the aggregate principal amount of the Third Lien Notes remaining outstanding was approximately \$28.5 million and the aggregate principal amount of Second Lien Notes outstanding was approximately \$120.6 million.

The Third Lien Notes are guaranteed by the Company's material U.S. subsidiaries, GX Technology Corporation, ION Exploration Products (U.S.A.), Inc. and I/O Marine Systems, Inc. (the "Guarantors"), and mature on May 15, 2018. Interest on the Third Lien Notes accrues at the rate of 8.125% per annum and will be payable semiannually in arrears on May 15 and November 15 of each year during their term.

Prior to the completion of the Exchange Offer and Consent Solicitation, the Third Lien Notes Indenture contained certain covenants that, among other things, limited or prohibited the Company's ability and the ability of its restricted subsidiaries to take certain actions or permit certain conditions to exist during the term of the Third Lien Notes, including among other things, incurring additional indebtedness, creating liens, paying dividends and making other distributions in respect of the Company's capital stock, redeeming the Company's capital stock, making investments or certain other restricted payments, selling certain kinds of assets, entering into transactions with affiliates, and effecting mergers or consolidations. These and other restrictive covenants contained in the Third Lien Notes Indenture are subject to certain exceptions and qualifications. After giving effect to the Exchange Offer and Consent Solicitation, the Third Lien Notes Indenture was amended to, among other things, provide for the release of the second priority security interest in the collateral securing the remaining Third Lien Notes and the grant of a third priority security interest in the collateral, subordinate to liens securing all senior and second priority indebtedness of the Company, including the Credit Facility and the Second Lien Notes, and eliminate substantially all of the restrictive covenants and certain events of default pertaining to the remaining Third Lien Notes.

As of September 30, 2017, the Company was in compliance with the covenants with respect to the Third Lien Notes.

The Second Lien Notes are senior secured second-priority obligations guaranteed by the Guarantors. The Second Lien Notes mature on December 15, 2021. Interest on the Second Lien Notes accrues at the rate of 9.125% per annum and is payable semiannually in arrears on June 15 and December 15 of each year during their term, except that the interest payment otherwise payable on June 15, 2021 will be payable on December 15, 2021.

The indenture dated April 28, 2016, governing the Second Lien Notes (the "Second Lien Notes Indenture") contains certain covenants that, among other things, limits or prohibits the Company's ability and the ability of its restricted subsidiaries to take certain actions or permit certain conditions to exist during the term of the Second Lien Notes, including among other things, incurring additional indebtedness, creating liens, paying dividends and making other distributions in respect of the Company's capital stock, redeeming the Company's capital stock, making investments or certain other restricted payments, selling certain kinds of assets, entering into transactions with affiliates, and effecting mergers or consolidations. These and other restrictive covenants contained in the Second Lien Notes Indenture are subject to certain exceptions and qualifications. All of the Company's subsidiaries are currently restricted subsidiaries.

As of September 30, 2017, the Company was in compliance with the covenants with respect to the Second Lien Notes.

On or after December 15, 2019, the Company may on one or more occasions redeem all or a part of the Second Lien Notes at the redemption prices set forth below, plus accrued and unpaid interest and special interest, if any, on the Second Lien Notes redeemed during the twelve-month period beginning on December 15th of the years indicated below:

Date	Percentage
2019	105.500%
2020	103.500%
2021 and thereafter	100.000%

#### (4) Net Income (Loss) per Share

Basic net income (loss) per common share is computed by dividing net income (loss) applicable to common shares by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per common share is determined based on the assumption that dilutive restricted stock and restricted stock unit awards have vested and outstanding dilutive stock options have been exercised and the aggregate proceeds were used to reacquire common stock using the average price of such common stock for the period. The total number of shares issued or reserved for future issuance under outstanding stock options at September 30, 2017 and 2016 was 782,739 and 877,569, respectively, and the total number of shares of restricted stock and shares reserved for restricted stock units outstanding at September 30, 2017 and 2016 was 163,184 and 293,340, respectively. The effects of the dilutive stock awards were anti-dilutive for the nine months ended September 30, 2017 and 2016, as reflected in the table below.

The following table summarizes the computation of basic and diluted net income (loss) per common share (in thousands, except per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net income (loss) attributable to ION	\$ 4,935	\$ 1,699	\$ (28,848)	\$ (58,657)
Weighted average number of common shares outstanding	11,890	11,786	11,862	11,269
Effect of dilutive stock awards	181	121	—	—
Weighted average number of diluted common shares outstanding	12,071	11,907	11,862	11,269
Basic net income (loss) per share	\$ 0.42	\$ 0.14	\$ (2.43)	\$ (5.21)
Diluted net income (loss) per share	\$ 0.41	\$ 0.14	\$ (2.43)	\$ (5.21)

## (5) Income Taxes

The Company maintains a valuation allowance for substantially all of its deferred tax assets. The valuation allowance is calculated in accordance with the provisions of the Financial Accounting Standards Board's ("FASB") Accounting Standard Codification ("ASC") Topic 740 "Income Taxes," which requires that a valuation allowance be established or maintained when it is "more likely than not" that all or a portion of deferred tax assets will not be realized. In the event the Company's expectations of future operating results change, the valuation allowance may need to be adjusted downward. As of September 30, 2017, the Company has no unreserved U.S. deferred tax assets.

The tax provision for the nine months ended September 30, 2017 has been calculated based on the actual tax expense incurred for the period. Given the current uncertainty in expected income generated in various foreign jurisdictions, where tax rates can vary greatly, the Company's actual tax rate is the best estimate of year-to-date tax expense. The Company's effective tax rates for the three months ended September 30, 2017 and 2016 were 25.2% and 63.4%, respectively. The Company's effective tax rate for the nine months ended September 30, 2017 and 2016 were (15.1)% and (11.2)% respectively. The Company's effective tax rates for the three and nine months ended September 30, 2017 were negatively impacted by the change in valuation allowance related to U.S. operating losses for which the Company cannot currently recognize a tax benefit. The Company's income tax expense for the nine months ended September 30, 2017 of \$3.7 million primarily relates to results from the Company's non-U.S. businesses.

The Company has approximately \$1.3 million of unrecognized tax benefits and does not expect to recognize significant increases in unrecognized tax benefits during the next 12-month period. Interest and penalties, if any, related to unrecognized tax benefits are recorded in income tax expense.

As of September 30, 2017, the Company's U.S. federal tax returns for 2013 and subsequent years remain subject to examination by tax authorities. The Company is no longer subject to U.S. Internal Revenue Service ("IRS") examination for periods prior to 2013, although carryforward attributes related to losses generated prior to 2013 may still be adjusted upon examination by the IRS if they either have been or will be used in an open year. In the Company's foreign tax jurisdictions, tax returns for 2010 and subsequent years generally remain open to examination.

## (6) Litigation

### *WesternGeco*

In June 2009, WesternGeco L.L.C. ("WesternGeco") filed a lawsuit against the Company in the United States District Court for the Southern District of Texas, Houston Division. In the lawsuit, styled *WesternGeco L.L.C. v. ION Geophysical Corporation*, WesternGeco alleged that the Company had infringed several method and apparatus claims contained in four of its United States patents regarding marine seismic streamer steering devices.

The trial began in July 2012. A verdict was returned by the jury in August 2012, finding that the Company infringed the claims contained in the four patents by supplying its DigiFIN® lateral streamer control units and the related software from the United States and awarded WesternGeco the sum of \$105.9 million in damages, consisting of \$12.5 million in reasonable royalty and \$93.4 million in lost profits.

In June 2013, the presiding judge entered a Memorandum and Order, ruling that WesternGeco is entitled to be awarded supplemental damages for the additional DigiFIN units that were supplied from the United States before and after the trial that were not included in the jury verdict due to the timing of the trial. In October 2013, the judge entered another Memorandum and Order, ruling on the number of DigiFIN units that are subject to supplemental damages and also ruling that the supplemental damages applicable to the additional units should be calculated by adding together the jury's previous reasonable royalty and lost profits damages awards per unit, resulting in supplemental damages of \$73.1 million.

In April 2014, the judge entered another Order, ruling that lost profits should not have been included in the calculation of supplemental damages in the October 2013 Memorandum and Order and reduced the supplemental damages award in the case from \$73.1 million to \$9.4 million. In the Order, the judge also further reduced the damages award in the case by \$3.0 million to reflect a settlement and license that WesternGeco entered into with a customer of the Company that had purchased and used DigiFIN units that were also included in the damage amounts awarded against the Company.

In May 2014, the judge signed and entered a Final Judgment in the amount of \$123.8 million related to the case. The Final Judgment also included an injunction that enjoins the Company, its agents and anyone acting in concert with it, from supplying in or from the United States the DigiFIN product or any parts unique to the DigiFIN product, or any instrumentality no more than colorably different from any of these products or parts, for combination outside of the United States. The Company has conducted its business in compliance with the District Court's orders in the case, and the Company has reorganized its operations such that it no longer supplies the DigiFIN product or any parts unique to the DigiFIN product in or from the United States.

The Company and WesternGeco each appealed the Final Judgment to the United States Court of Appeals for the Federal Circuit in Washington, D.C. On July 2, 2015, the Court of Appeals reversed in part the judgment, holding the District Court erred by including lost profits in the Final Judgment. Lost profits were \$93.4 million and prejudgment interest was approximately \$10.9 million of the \$123.8 million Final Judgment. Pre-judgment interest on the lost profits portion will be treated in the same way as the lost profits. Post-judgment interest will likewise be treated in the same fashion. On July 29, 2015, WesternGeco filed a petition for rehearing en banc before the Court of Appeals. On October 30, 2015 the Court of Appeals denied WesternGeco's petition for rehearing en banc.

On February 26, 2016, WesternGeco filed a petition for writ of certiorari by the Supreme Court. The Company filed its response on April 27, 2016. Subsequently, on June 20, 2016, the Supreme Court refused to disturb the Court of Appeals ruling finding no lost profits as a matter of law. Separately, in light of the changes in case law regarding the standard of proof for willfulness in the Halo and Stryker cases, the Supreme Court indicated that the case should be remanded to the Federal Circuit for a determination of whether or not the willfulness determination by the District Court was appropriate.

On November 14, 2016, the District Court issued an order reducing the amount of the appeal bond from \$120.0 million to \$65.0 million, ordered the sureties to pay principal and interest on the royalty previously awarded and declined to issue a final judgment until after consideration of whether enhanced damages related to willfulness should be awarded in the case. While the Company did not agree with the unusual decision by the District Court ordering payment of the royalty damages and interest without a final judgment, the Company paid the \$20.8 million due pursuant to the order to WesternGeco on November 25, 2016.

On March 14, 2017, the District Court held a hearing on whether or not additional damages for willfulness would be payable. The Judge found that ION's infringement was willful, based on his perception that ION did not adequately investigate the scope of the patent, and ION's conduct during trial. However, in his May 16, 2017 order, he limited enhanced damages to \$5.0 million because it was a "close case," there was no evidence of copying, and ION was simply acting as a competitor in a capitalist marketplace. The District Court also ordered the appeal bond to be released and discharged. The Court's findings were memorialized in an order issued on May 16, 2017. On June 30, 2017, WesternGeco and the Company jointly agreed that neither party would appeal the District Court's award of \$5.0 million in enhanced damages. The parties also agreed that the \$5.0 million would be paid over the course of 12 months with \$1.25 million being paid in two installments of \$0.625 million in 2017 and the remaining \$3.75 million being paid in three quarterly payments of \$1.25 million beginning January 1, 2018. This agreement was memorialized by the court in an order issued on July 26, 2017.

WesternGeco filed a second petition for writ of certiorari in the U.S. Supreme Court on February 17, 2017, appealing the lost profits issue again. The Company filed its response to WesternGeco's second attempt to appeal to the Supreme Court the lost profits issue, raising both the substantive matters the Company addressed by opposing WesternGeco's first petition, and also raising a procedural argument that WesternGeco cannot raise the same issue for a second time in a second petition for certiorari. On May 30, 2017, the Supreme Court called for the views of the U.S. Solicitor General regarding whether or not to grant certiorari. (The U.S. Supreme Court has discretion to hear, or not hear, WesternGeco's appeal; granting WesternGeco's request for a writ of certiorari would mean that the U.S. Supreme Court decided to hear WesternGeco's appeal of the decision by the United States Court of Appeals for the Federal Circuit with respect to the lost profits issue. If the Supreme Court agrees to hear WesternGeco's appeal, the Company will contest WesternGeco's appeal at the Supreme Court. In such a case, it is possible that the Supreme Court could issue a ruling adverse to the Company.) The Company and WesternGeco each met with the Solicitor General's office in late July, 2017. The Solicitor General is expected to issue its brief as to whether the Supreme Court should grant certiorari near the end of 2017 or the beginning of 2018, although there is no deadline for the Solicitor General to issue its brief.

### Other

The Company has been named in various other lawsuits or threatened actions that are incidental to its ordinary business. Litigation is inherently unpredictable. Any claims against the Company, whether meritorious or not, could be time-consuming, cause the Company to incur costs and expenses, require significant amounts of management time and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. Management currently believes that the ultimate resolution of these matters will not have a material adverse impact on the financial condition, results of operations or liquidity of the Company.

#### (7) Other Income (Expense), Net

The following table is a summary of other income (expense), net (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Accrual for loss related to legal proceedings (Footnote 6)	\$ —	\$ —	\$ (5,000)	\$ —
Loss on bond exchange	—	—	—	(2,182)
Other income (expense), net	722	(2,027)	846	(1,442)
Total other income (expense), net	\$ 722	\$ (2,027)	\$ (4,154)	\$ (3,624)

#### (8) Details of Selected Balance Sheet Accounts

##### Inventories

The following table is a summary of inventories (in thousands):

	September 30, 2017	December 31, 2016
Raw materials and subassemblies	\$ 20,519	\$ 21,454
Work-in-process	1,044	2,255
Finished goods	7,392	6,581
Reserve for excess and obsolete inventories	(14,691)	(15,049)
Total	\$ 14,264	\$ 15,241

#### (9) Accumulated Other Comprehensive Loss

The following table is a summary of changes in accumulated other comprehensive loss by component (in thousands):

	Foreign currency translation adjustments	Total
Accumulated other comprehensive loss at December 31, 2016	\$ (21,748)	\$ (21,748)
Net current-period other comprehensive income	2,749	2,749
Accumulated other comprehensive loss at September 30, 2017	\$ (18,999)	\$ (18,999)

**(10) Supplemental Cash Flow Information and Non-cash Activity**

The following table is a summary of cash paid for Interest and Income taxes and non-cash items from investing and financing activities (in thousands):

	Nine Months Ended September 30,	
	2017	2016
Cash paid during the period for:		
Interest	\$ 7,273	\$ 8,819
Income taxes	3,756	2,579
Non-cash items from investing and financing activities:		
Investment in multi-client data library in accounts payable and accrued expenses	8,485	—
Bond exchange	—	10,740 <sup>(a)</sup>

<sup>(a)</sup> This represents the non-cash portion of the bond exchange.

**(11) Fair Value of Financial Instruments**

Authoritative guidance on fair value measurements defines fair value, establishes a framework for measuring fair value and stipulates the related disclosure requirements. The Company follows a three-level hierarchy, prioritizing and defining the types of inputs used to measure fair value.

The carrying amounts of the Company's debt as of September 30, 2017 and December 31, 2016 were \$159.6 million and \$163.9 million, respectively, compared to its fair values of \$139.8 million and \$114.8 million as of September 30, 2017 and December 31, 2016, respectively. The fair value of the debt was calculated using a readily observable price (Level 1).

*Fair Value of Other Financial Instruments.* Due to their highly liquid nature, the amount of the Company's other financial instruments, including cash and cash equivalents, accounts and unbilled receivables, notes receivable, accounts payable, and accrued multi-client data library royalties, represent their approximate fair value.

**(12) Stockholder's Equity, Stock-Based Compensation Expense and Repurchase Plan***At-The-Market Equity Offering Program*

On December 22, 2016 the Company announced that it filed a prospectus supplement under which it could have sold up to \$20 million of its common stock through an "at-the-market" equity offering program (the "ATM Program"). ION intended to use the net proceeds from sales under the ATM Program to be positioned to capitalize on opportunities such as acquiring complementary distressed assets, or other value-added transactions. Effective May 2, 2017, the Company terminated and canceled the ATM Program. No shares were sold pursuant to the ATM Program.

*Stock-Based Compensation*

The total number of shares issued or reserved for future issuance under outstanding stock options at September 30, 2017 and 2016 was 782,739 and 877,569, respectively, and the total number of shares of restricted stock and shares reserved for restricted stock units outstanding at September 30, 2017 and 2016 was 163,184 and 293,340, respectively. The following table presents a summary of the activity related to stock options, restricted stock and restricted stock unit awards for the nine months ended September 30, 2017:

	Stock Options	Restricted Stock and Unit Awards
	Number of Shares	
Outstanding at December 31, 2016	847,635	285,308
Granted	—	17,500
Stock options exercised/restricted stock and unit awards vested	(12,500)	(115,133)
Cancelled/forfeited	(52,396)	(24,491)
Outstanding at September 30, 2017	<u>782,739</u>	<u>163,184</u>

Stock-based compensation expense recognized for the nine months ended September 30, 2017 and 2016, totaled \$1.7 million and \$2.5 million, respectively.

In the first quarter 2017, the Company adopted ASU 2016-09, "*Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*," that changed how the Company accounts for certain aspects of share-based payments to employees. The Company is required to recognize the income tax effects of awards in the statement of income when the awards vest or are settled. The guidance on employers' accounting for an employee's use of shares to satisfy the employer's statutory income tax withholding obligation and for forfeitures is changed and now requires companies to present excess tax benefits as an operating activity on the statement of cash flows rather than as a financing activity. There was no impact of adoption of ASU 2016-09 on net income, basic and diluted earnings per share, deferred tax assets or net cash from operations.

#### *Stock Repurchase Program*

On November 4, 2015, the Company's board of directors approved a stock repurchase program authorizing a Company stock repurchase, from time to time from November 10, 2015, through November 10, 2017, up to \$25 million in shares of the Company's outstanding common stock. The stock repurchase program may be implemented through open market repurchases or privately negotiated transactions, at management's discretion. The actual timing, number and value of shares repurchased under the program will be determined by management at its discretion and will depend on a number of factors including the market price of the shares of our common stock and general market and economic conditions, applicable legal requirements and compliance with the terms of our outstanding indebtedness. The repurchase program does not obligate the Company to acquire any particular amount of common stock and may be modified or suspended at any time and could be terminated prior to completion. As of September 30, 2017, the Company had repurchased \$3.0 million or 451,792 shares of its common stock under the repurchase program at an average price per share of \$6.41. The Company does not expect to repurchase any additional shares prior to the expiration of the program on November 10, 2017.

### **(13) Recent Accounting Pronouncements**

*Revenue Recognition* — In May 2014, the FASB and the International Accounting Standards Board ("IASB") jointly issued new accounting guidance for recognition of revenue. In August 2015, the FASB issued guidance deferring the effective date to years beginning after December 15, 2017, and interim periods within those years. This new guidance replaces virtually all existing U.S. GAAP and IFRS guidance on revenue recognition. The underlying principle is that the entity will recognize revenue to depict the transfer of goods and services to customers at an amount that the entity expects to be entitled to in the exchange of goods and services. The guidance provides a five-step analysis of transactions to determine when and how revenue is recognized. Other major provisions include capitalization of certain contract costs, consideration of time value of money in the transaction price, and allowing estimates of variable consideration to be recognized before contingencies are resolved in certain circumstances. The guidance also requires enhanced disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers.

The Company currently expects to use the modified retrospective adoption method effective January 1, 2018. While the Company continues to finalize its assessment regarding how the implementation of this new guidance may affect the Company's New Venture group's financial position or results of operations, no material impact is currently expected. The Company does not expect the adoption of ASC 606 to have a material impact on its consolidated balance sheets or consolidated statement of operations for its Imaging Services group, Devices group, Optimization Software & Services group or its Ocean Bottom Seismic Services segment. The Company has put in place an implementation team to review contracts subject to the new revenue standard, provide trainings and work with third party specialists to assist in the evaluation. The implementation team continues to review contracts and monitor the potential impact to the Company's financial position or results of operations.

In February 2016, the FASB issued ASU 2016-02, "*Leases (Topic 842)*" which introduces the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous guidance. The guidance will be effective for annual reporting periods beginning after December 15, 2018, and interim periods within those fiscal years with early adoption permitted. The Company currently expects that the adoption of ASU 2016-02 may have a material impact related to its facility operating leases on its consolidated financial statements, and continues to evaluate the impact of vessel leases in the Company's Ocean Bottom Seismic Services segment.

In November 2016, the FASB issued ASU 2016-18, "*Statement of Cash Flows (Topic 230), Restricted Cash (a consensus of the FASB Emerging Issues Task Force) (ASU 2016-18)*," that will require entities to show changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. When cash, cash equivalents, restricted cash and restricted cash equivalents are presented in more than one line item on the balance sheet, a reconciliation of the totals in the statement of cash flows to the related captions in the balance sheet is required. The guidance will be effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods. Early adoption is permitted. The Company does not currently expect the adoption of ASU 2016-18 to have a material impact on its consolidated financial statements.



**(14) Condensed Consolidating Financial Information**

The Notes were issued by ION Geophysical Corporation and are guaranteed by the Guarantors, all of which are wholly-owned subsidiaries. The Guarantors have fully and unconditionally guaranteed the payment obligations of ION Geophysical Corporation with respect to the Notes. The following condensed consolidating financial information presents the results of operations, financial position and cash flows for:

- ION Geophysical Corporation and the Guarantors (in each case, reflecting investments in subsidiaries utilizing the equity method of accounting).
- All other subsidiaries of ION Geophysical Corporation that are not Guarantors.
- The consolidating adjustments necessary to present ION Geophysical Corporation's results on a consolidated basis.

This condensed consolidating financial information should be read in conjunction with the accompanying consolidated financial statements and footnotes. For additional information pertaining to the Notes, See Item 2. "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" in Part II of this Form 10-Q.

September 30, 2017

Balance Sheet	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
<b>ASSETS</b>					
Current assets:					
Cash and cash equivalents	\$ 17,244	\$ —	\$ 22,981	\$ —	\$ 40,225
Accounts receivable, net	40	6,034	33,300	—	39,374
Unbilled receivables	—	11,357	14,476	—	25,833
Inventories	—	8,582	5,682	—	14,264
Prepaid expenses and other current assets	1,558	504	2,197	—	4,259
Total current assets	18,842	26,477	78,636	—	123,955
Property, plant, equipment and seismic rental equipment, net	761	8,292	46,135	—	55,188
Multi-client data library, net	—	68,791	27,960	—	96,751
Investment in subsidiaries	679,958	303,996	—	(983,954)	—
Goodwill	—	—	24,048	—	24,048
Intangible assets, net	—	2,002	24	—	2,026
Intercompany receivables	—	—	52,655	(52,655)	—
Other assets	1,080	145	260	—	1,485
Total assets	<u>\$ 700,641</u>	<u>\$ 409,703</u>	<u>\$ 229,718</u>	<u>\$ (1,036,609)</u>	<u>\$ 303,453</u>
<b>LIABILITIES AND EQUITY</b>					
Current liabilities:					
Current maturities of long-term debt	\$ 38,278	\$ 541	\$ —	\$ —	\$ 38,819
Accounts payable	2,682	19,720	2,272	—	24,674
Accrued expenses	16,325	13,458	11,091	—	40,874
Accrued multi-client data library royalties	—	24,371	205	—	24,576
Deferred revenue	—	2,431	8,444	—	10,875
Total current liabilities	57,285	60,521	22,012	—	139,818
Long-term debt, net of current maturities	116,506	—	—	—	116,506
Intercompany payables	497,658	38,708	—	(536,366)	—
Other long-term liabilities	461	6,170	10,435	—	17,066
Total liabilities	671,910	105,399	32,447	(536,366)	273,390
Equity:					
Common stock	119	290,460	49,394	(339,854)	119
Additional paid-in capital	901,138	180,699	202,290	(382,989)	901,138
Accumulated earnings (deficit)	(853,527)	233,706	42,766	(276,472)	(853,527)
Accumulated other comprehensive income (loss)	(18,999)	4,385	(19,746)	15,361	(18,999)
Due from ION Geophysical Corporation	—	(404,946)	(78,765)	483,711	—
Total stockholders' equity	28,731	304,304	195,939	(500,243)	28,731
Noncontrolling interests	—	—	1,332	—	1,332
Total equity	28,731	304,304	197,271	(500,243)	30,063
Total liabilities and equity	<u>\$ 700,641</u>	<u>\$ 409,703</u>	<u>\$ 229,718</u>	<u>\$ (1,036,609)</u>	<u>\$ 303,453</u>

Balance Sheet	December 31, 2016				
	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
ASSETS					
Current assets:					
Cash and cash equivalents	\$ 23,042	\$ —	\$ 29,610	\$ —	\$ 52,652
Accounts receivable, net	—	12,775	7,995	—	20,770
Unbilled receivables	—	5,275	8,140	—	13,415
Inventories	—	8,610	6,631	—	15,241
Prepaid expenses and other current assets	3,387	4,624	1,548	—	9,559
Total current assets	26,429	31,284	53,924	—	111,637
Property, plant, equipment and seismic rental equipment, net	1,745	12,369	53,374	—	67,488
Multi-client data library, net	—	97,369	8,566	—	105,935
Investment in subsidiaries	660,880	257,732	—	(918,612)	—
Goodwill	—	—	22,208	—	22,208
Intangible assets, net	—	3,008	95	—	3,103
Intercompany receivables	—	—	32,174	(32,174)	—
Other assets	2,469	145	231	—	2,845
Total assets	\$ 691,523	\$ 401,907	\$ 170,572	\$ (950,786)	\$ 313,216
LIABILITIES AND EQUITY					
Current liabilities:					
Current maturities of long-term debt	\$ 11,281	\$ 3,166	\$ 134	\$ —	\$ 14,581
Accounts payable	2,101	19,720	5,068	—	26,889
Accrued expenses	8,579	10,016	7,645	—	26,240
Accrued multi-client data library royalties	—	23,663	—	—	23,663
Deferred revenue	—	2,667	1,042	—	3,709
Total current liabilities	21,961	59,232	13,889	—	95,082
Long-term debt, net of current maturities	143,930	279	—	—	144,209
Intercompany payables	472,276	10,155	—	(482,431)	—
Other long-term liabilities	467	12,117	7,943	—	20,527
Total liabilities	638,634	81,783	21,832	(482,431)	259,818
Equity:					
Common stock	118	290,460	19,138	(309,598)	118
Additional paid-in capital	899,198	180,700	232,590	(413,290)	899,198
Accumulated earnings (deficit)	(824,679)	216,730	(3,639)	(213,091)	(824,679)
Accumulated other comprehensive income (loss)	(21,748)	4,420	(21,787)	17,367	(21,748)
Due from ION Geophysical Corporation	—	(372,186)	(78,071)	450,257	—
Total stockholders' equity	52,889	320,124	148,231	(468,355)	52,889
Noncontrolling interests	—	—	509	—	509
Total equity	52,889	320,124	148,740	(468,355)	53,398
Total liabilities and equity	\$ 691,523	\$ 401,907	\$ 170,572	\$ (950,786)	\$ 313,216

**Three Months Ended September 30, 2017**

Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Net revenues	\$ —	\$ 16,554	\$ 44,541	\$ —	\$ 61,095
Cost of sales	—	19,517	11,469	—	30,986
Gross profit (loss)	—	(2,963)	33,072	—	30,109
Total operating expenses	8,349	7,856	3,968	—	20,173
Income (loss) from operations	(8,349)	(10,819)	29,104	—	9,936
Interest expense, net	(4,054)	36	59	—	(3,959)
Intercompany interest, net	259	(1,603)	1,344	—	—
Equity in earnings of investments	17,097	31,565	—	(48,662)	—
Other income (expense)	19	(8)	711	—	722
Net income (loss) before income taxes	4,972	19,171	31,218	(48,662)	6,699
Income tax expense	37	837	812	—	1,686
Net income	4,935	18,334	30,406	(48,662)	5,013
Net income attributable to noncontrolling interests	—	—	(78)	—	(78)
Net income (loss) attributable to ION	\$ 4,935	\$ 18,334	\$ 30,328	\$ (48,662)	\$ 4,935
Comprehensive net income	\$ 5,968	\$ 18,347	\$ 31,351	\$ (49,620)	\$ 6,046
Comprehensive income attributable to noncontrolling interest	—	—	(78)	—	(78)
Comprehensive net income attributable to ION	\$ 5,968	\$ 18,347	\$ 31,273	\$ (49,620)	\$ 5,968

**Three Months Ended September 30, 2016**

Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Net revenues	\$ —	\$ 30,155	\$ 48,467	\$ —	\$ 78,622
Cost of sales	—	22,724	24,133	—	46,857
Gross profit	—	7,431	24,334	—	31,765
Total operating expenses	7,692	7,186	5,023	—	19,901
Income (loss) from operations	(7,692)	245	19,311	—	11,864
Interest expense, net	(4,583)	(32)	8	—	(4,607)
Intercompany interest, net	276	(1,138)	862	—	—
Equity in earnings of investments	13,494	15,039	—	(28,533)	—
Other income (expense)	245	948	(3,220)	—	(2,027)
Net income before income taxes	1,740	15,062	16,961	(28,533)	5,230
Income tax expense	41	670	2,605	—	3,316
Net income	1,699	14,392	14,356	(28,533)	1,914
Net income attributable to noncontrolling interests	—	—	(215)	—	(215)
Net income attributable to ION	\$ 1,699	\$ 14,392	\$ 14,141	\$ (28,533)	\$ 1,699
Comprehensive net income	\$ 616	\$ 14,392	\$ 13,058	\$ (27,235)	\$ 831
Comprehensive income attributable to noncontrolling interest	—	—	(215)	—	(215)
Comprehensive net income attributable to ION	\$ 616	\$ 14,392	\$ 12,843	\$ (27,235)	\$ 616

**Nine Months Ended September 30, 2017**

Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Net revenues	\$ —	\$ 44,533	\$ 95,119	\$ —	\$ 139,652
Cost of sales	—	55,473	32,351	—	87,824
Gross profit (loss)	—	(10,940)	62,768	—	51,828
Total operating expenses	25,761	20,727	12,888	—	59,376
Income (loss) from operations	(25,761)	(31,667)	49,880	—	(7,548)
Interest expense, net	(12,697)	(60)	93	—	(12,664)
Intercompany interest, net	852	(4,743)	3,891	—	—
Equity in earnings of investments	13,963	49,418	—	(63,381)	—
Other income (expense)	(5,068)	(348)	1,262	—	(4,154)
Net income (loss) before income taxes	(28,711)	12,600	55,126	(63,381)	(24,366)
Income tax expense	137	(4,376)	7,909	—	3,670
Net income	(28,848)	16,976	47,217	(63,381)	(28,036)
Net income attributable to noncontrolling interests	—	—	(812)	—	(812)
Net income (loss) attributable to ION	\$ (28,848)	\$ 16,976	\$ 46,405	\$ (63,381)	\$ (28,848)
Comprehensive net income (loss)	\$ (26,099)	\$ 16,941	\$ 49,257	\$ (65,386)	\$ (25,287)
Comprehensive income attributable to noncontrolling interest	—	—	(812)	—	(812)
Comprehensive net income (loss) attributable to ION	\$ (26,099)	\$ 16,941	\$ 48,445	\$ (65,386)	\$ (26,099)

**Nine Months Ended September 30, 2016**

Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Net revenues	\$ —	\$ 58,907	\$ 78,532	\$ —	\$ 137,439
Cost of sales	—	67,061	42,690	—	109,751
Gross profit (loss)	—	(8,154)	35,842	—	27,688
Total operating expenses	24,894	21,687	15,960	—	62,541
Income (loss) from operations	(24,894)	(29,841)	19,882	—	(34,853)
Interest expense, net	(13,917)	(179)	53	—	(14,043)
Intercompany interest, net	727	(3,250)	2,523	—	—
Equity in earnings (losses) of investments	(18,617)	19,163	—	(546)	—
Other income (expense)	(1,841)	771	(2,554)	—	(3,624)
Net income (loss) before income taxes	(58,542)	(13,336)	19,904	(546)	(52,520)
Income tax expense	115	1,419	4,331	—	5,865
Net income (loss)	(58,657)	(14,755)	15,573	(546)	(58,385)
Net income attributable to noncontrolling interests	—	—	(272)	—	(272)
Net income (loss) applicable to ION	\$ (58,657)	\$ (14,755)	\$ 15,301	\$ (546)	\$ (58,657)
Comprehensive net income (loss)	\$ (63,939)	\$ (14,755)	\$ 10,019	\$ 5,008	\$ (63,667)
Comprehensive income attributable to noncontrolling interest	—	—	(272)	—	(272)
Comprehensive net income (loss) attributable to ION	\$ (63,939)	\$ (14,755)	\$ 9,747	\$ 5,008	\$ (63,939)

Statement of Cash Flows	Nine Months Ended September 30, 2017			
	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Total Consolidated
	(In thousands)			
Cash flows from operating activities:				
Net cash provided by (used in) operating activities	\$ (2,785)	\$ 11,764	\$ 1,039	\$ 10,018
Cash flows from investing activities:				
Cash invested in multi-client data library	—	(7,041)	(9,535)	(16,576)
Purchase of property, plant, equipment and seismic rental equipment	(165)	(775)	(81)	(1,021)
Net cash used in investing activities	(165)	(7,816)	(9,616)	(17,597)
Cash flows from financing activities:				
Payments on notes payable and long-term debt	(1,018)	(3,244)	(58)	(4,320)
Intercompany lending	(1,574)	(704)	2,278	—
Costs associated with issuance of equity	(123)	—	—	(123)
Other financing activities	(134)	—	—	(134)
Net cash provided by (used in) financing activities	(2,849)	(3,948)	2,220	(4,577)
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	(271)	(271)
Net decrease in cash and cash equivalents	(5,799)	—	(6,628)	(12,427)
Cash and cash equivalents at beginning of period	23,042	—	29,610	52,652
Cash and cash equivalents at end of period	\$ 17,243	\$ —	\$ 22,982	\$ 40,225

Statement of Cash Flows	Nine Months Ended September 30, 2016			
	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Total Consolidated
	(In thousands)			
Cash flows from operating activities:				
Net cash provided by (used in) operating activities	\$ (31,403)	\$ 50,669	\$ (16,034)	\$ 3,232
Cash flows from investing activities:				
Investment in multi-client data library	—	(10,027)	(1,574)	(11,601)
Purchase of property, plant, equipment and seismic rental equipment	—	(567)	—	(567)
Net cash used in investing activities	—	(10,594)	(1,574)	(12,168)
Cash flows from financing activities:				
Borrowings under revolving line of credit	15,000	—	—	15,000
Repurchase of common stock	(964)	—	—	(964)
Payments on notes payable and long-term debt	(951)	(5,304)	(471)	(6,726)
Cost associated with issuance of notes	(6,638)	—	—	(6,638)
Intercompany lending	31,867	(34,771)	2,904	—
Payment to repurchase bonds	(15,000)	—	—	(15,000)
Other financing activities	13	—	—	13
Net cash provided by (used in) financing activities	23,327	(40,075)	2,433	(14,315)
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	854	854
Net decrease in cash and cash equivalents	(8,076)	—	(14,321)	(22,397)
Cash and cash equivalents at beginning of period	33,734	—	51,199	84,933
Cash and cash equivalents at end of period	\$ 25,658	\$ —	\$ 36,878	\$ 62,536

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

### Executive Summary

#### *Our Business*

In this Form 10-Q, "ION Geophysical," "ION," "the company" (or, "the Company"), "we," "our," "ours" and "us" refer to ION Geophysical Corporation and its consolidated subsidiaries, except where the context otherwise requires or as otherwise indicated.

The information contained in this Quarterly Report on Form 10-Q contains references to trademarks, service marks and registered marks of ION and our subsidiaries, as indicated. Except where stated otherwise or unless the context otherwise requires, the terms "VectorSeis," "Orca," "WiBand," and "4Sea" refer to VECTORSEIS®, ORCA®, WiBand® and 4Sea® registered marks owned by ION, and the terms "Marlin" and "Gator," refers to the Marlin™ and GATOR™, trademarks owned by ION.

We provide geoscience technology, services and solutions to the global oil and gas industry. Our offerings are designed to allow oil and gas companies to obtain higher resolution images of the Earth's subsurface to reduce their risk and optimize assets across the exploration and production lifecycle. Seismic imaging plays a fundamental role in hydrocarbon exploration and reservoir development by delineating structures, rock types and fluid locations in the subsurface. The high resolution images of the Earth's subsurface can be used to reduce uncertainty associated with identifying sources of hydrocarbons and pinpointing drilling locations for wells, which can be costly and risky.

We acquire and process seismic data on both a proprietary and multi-client basis. The multi-client seismic surveys for our data library business are pre-funded, or underwritten, in part by our customers, and, with the exception of our ocean bottom seismic ("OBS") data acquisition company, OceanGeo B.V. ("OceanGeo"), we utilize an "asset lite" strategy by contracting with third party seismic data acquisition companies to acquire the seismic data, all of which is intended to minimize our risk exposure. We serve customers in most major energy producing regions of the world from offices strategically located across six continents.

We provide our services and products through three business segments: E&P Technology & Services, E&P Operations Optimization and Ocean Bottom Seismic Services. In addition, we have a 49% ownership interest in our INOVA Geophysical Equipment Limited joint venture ("INOVA Geophysical," or "INOVA"). As of December 31, 2014, we wrote down our investment in INOVA Geophysical to zero, and therefore no longer record our share of losses in the joint venture.

For decades, we have provided innovative seismic data acquisition technology, such as multicomponent imaging with VectorSeis products, the ability to record seismic data from basins below ice, and cableless seismic techniques. The advanced technologies we currently offer include our Orca and Gator command and control software systems, WiBand broadband data processing technology, our OBS acquisition systems, and other technologies, each of which is designed to deliver improvements in both image quality and productivity. In 2015, we introduced our Marlin solution for optimizing simultaneous operations offshore. Our new OBS technology, 4Sea, opens a much larger market due to the system's increased flexibility and efficiency. We introduced this system to all major consumers of OBS projects at the European Association of Geophysical Contractors annual meeting in June 2017 and it was extremely well received. We have worked quietly for over three years to develop this system and believe it will be extremely competitive.

We have approximately 500 patents and pending patent applications in various countries around the world. Approximately 49% of our employees are in technical roles and over 25% of our employees have advanced degrees.

***E&P Technology & Services.*** Our E&P Technology & Services segment provides three distinct service activities that often work together.

Our E&P Technology & Services segment focuses on providing services to help E&P companies to make better decisions, reduce risk and maximize value. For example, E&P Technology & Services provides information to better understand new frontiers, imaging services to better understand complex subsurface geologies and consulting services to optimize asset decisions and portfolios and to help host governments maximize assets by supporting a license round, etc.

Our Ventures services are designed to manage the entire seismic process for multi-client or proprietary surveys, from survey planning and design to data acquisition and management, to final subsurface imaging and reservoir characterization. Our Ventures group focuses on the technologically intensive components of the image development process, such as survey planning and design, and data processing and interpretation, outsourcing the logistics components (such as field acquisition) to experienced seismic and other geophysical contractors. Since 2002, our basin exploration seismic data programs have resulted in a substantial data library that covers significant portions of many basins in the world, including offshore East and West Africa, South America, the Arctic, the Gulf of Mexico and Australia.



Our Imaging Services group offers data processing and imaging services designed to help our E&P customers reduce exploration and production risk, evaluate and develop reservoirs, and increase production. Imaging Services develops a series of subsurface images by applying its processing technology to data owned or licensed by its customers. We maintain approximately 17 petabytes of digital seismic data storage in four global data centers, including two core data centers located in Houston and in the U.K.

Our E&P Advisors group partners with operators, energy industry regulators and capital institutions to capture and monetize E&P opportunities worldwide. This group provides technical, commercial and strategic advice across the E&P value chain, working at basin, prospect and field scales.

**E&P Operations Optimization.** Our E&P Operations Optimization segment combines our Optimization Software & Services and Devices offerings.

Our Optimization Software & Services group provides survey design and command and control software systems and related services for towed marine streamer and seabed operations. Our Orca software is installed on towed streamer marine vessels worldwide, and our Gator software is used by many re-deployable and permanent seabed acquisition systems. Our Marlin solution is used for optimizing simultaneous operations offshore.

Our Devices group is engaged in the manufacture and repairs of marine towed streamer positioning and control systems and analog geophone sensors.

**Ocean Bottom Seismic Services.** Through our experienced OceanGeo team, we offer a fully integrated OBS solution that includes survey design, planning, and acquisition services performed by our crew using custom designed vessels to maximize image quality, operational efficiency and safety. Our team manufactures and repairs re-deployable ocean bottom cable seismic data acquisition systems and shipboard recorders for use in OBS data acquisition. In addition, our team provides superior imaging via OceanGeo's exclusive use of our seabed acquisition systems; and data processing, interpretation and reservoir services, by our Imaging Services and E&P Advisors groups.

**INOVA Geophysical.** Historically, we conducted our land seismic equipment business through INOVA Geophysical, which is a joint venture with BGP Inc. ("BGP"). BGP is a subsidiary of China National Petroleum Corporation, and is generally regarded as the world's largest land geophysical service contractor. BGP owns a 51% equity interest in INOVA Geophysical, and we own the remaining 49% interest. INOVA manufactures cable-based and cableless data acquisition systems, digital sensors, vibroseis vehicles (i.e., vibrator trucks) and source controllers for land seismic surveys.

#### **Macroeconomic Conditions**

Demand for our services and products is cyclical and dependent upon activity levels in the oil and gas industry, particularly our customers' willingness to invest capital in the exploration for oil and natural gas. Our customers' capital spending programs are generally based on their outlook for near-term and long-term commodity prices, economic growth, commodity demand and estimates of resource production. Following an unprecedented two years of double-digit declines, third-party reports now indicate that global exploration and production spending is expected to increase 8% in 2017, with further increases of 4% in 2018.

In the past few years, crude oil prices have been volatile due to global economic uncertainties. Significant downward oil price volatility began late in 2014 and reached a low average of \$33 per barrel in early 2016. The material decrease in crude oil prices can be attributed principally to high levels of global crude oil inventories resulting from significant production growth in the U.S. shale plays, the strengthening of the U.S. dollar relative to other foreign currencies and the Organization of Petroleum Exporting Countries ("OPEC") increasing its production, causing a global supply and demand imbalance for crude oil. In late November 2016, OPEC and other non-OPEC participants such as Russia reached an agreement to cut their oil production.

The prices for Intercontinental Exchange Brent ("Brent") and West Texas Intermediate ("WTI") crude oil remained steady at an average of \$52 per barrel and \$49 per barrel, respectively, in the first nine months of 2017. This represents an improvement over the average crude oil prices for the full year 2016 of \$43 per barrel and \$42 per barrel, respectively. This increase was due to multiple factors, including successful OPEC production cuts and net inventory crude draws which reduced the current crude surplus. Many analysts currently expect the crude price to remain close to the current price for the remainder of 2017. Energy reform in Mexico and a bill passed in Brazil that eliminates the requirement for Petrobras to participate in every presalt offshore block, in conjunction with the stability of oil prices, has resulted in increased investment in those areas. In addition, price stability has encouraged North American drillers to increase shale production. During the first nine months of 2017, U.S. producers added 282 rigs bringing the total U.S. rig count 940, a 43% increase during the first nine months of 2017, compared to 658 rigs at the end of 2016.

Given the historical volatility of crude prices, there is a continued risk that if prices start to decline again due to high levels of crude oil production, there is a potential for slowing growth rates in various global regions and/or for ongoing supply/demand imbalances.

Prices for natural gas in the U.S. averaged \$3.01 per mmBtu in the first nine months of 2017, compared to \$2.40 per mmBtu for the full year 2016, and \$4.57 per mmBtu for the first nine months of 2014. As a result of natural gas production growth outpacing demand in the U.S., natural gas prices continue to be weak relative to prices experienced from 2006 through 2008. If the supply of natural gas from conventional and unconventional production or associated natural gas production from oil wells continues to exceed demand, prices for natural gas may remain depressed for an extended period of time.

After a period of growth in exploration activities and associated spending leading up to the end of 2014, many E&P companies shifted their focus to production activities, away from exploration, as the continued decline in oil and gas prices resulted in decreased revenues, prompting cost reduction initiatives across the industry. From the end of 2014 through 2016, E&P companies decreased spending on exploration and reportedly focused their spending on critical production requirements and existing commitments. We believe this was due to several factors, but primarily because operational cash flows of E&P companies were no longer sufficient to cover capital expenditures while continuing to pay cash dividends to shareholders. E&P companies relied on asset sales and debt financings to fund capital requirements amid demands for greater returns to shareholders. The combination of these factors placed many E&P companies in a position where they were unable to cover both their capital expenditure budgets and targeted cash returns to shareholders. As a result, E&P companies dramatically cut spending, with exploration spending receiving the largest reductions and seismic spending being one of the most discretionary parts of their exploration budgets. As a result of this industry downturn, many customers experienced a significant reduction in their liquidity with challenges accessing the capital markets. Several exploration and production companies declared bankruptcy, or exchanged equity for the forgiveness of debt, while others were forced to sell assets in an effort to preserve liquidity. However, over the past 12 months, access to the capital and debt markets improved significantly for certain of these customers.

During 2017 and into 2018, E&P spending is expected to rebound and increase following two successive years of double digit declines as commodity prices are forecasted to remain more stable. This positive trend in E&P spending, aided by favorable macroeconomic conditions has resulted in increased revenues during the first nine months of 2017. If the global supply of oil decreases due to reduced capital investment by E&P companies, government instability occurs in a major oil-producing nation or energy demand increases in the U.S. or in countries such as China and India, the recovery in WTI and Brent crude oil prices could continue to improve. If commodity prices start to deteriorate again, demand for our services and products could decline.

#### ***Impact to Our Business***

During the first nine months of 2017, we saw renewed customer interest in underwriting of our new venture programs as oil companies were able to right-size their expenditures to current oil prices and generate profits for the first time in nine quarters. During the first nine months of 2017, revenues increased by 2% as compared to the first nine months of 2016. During the first nine months of 2016, our OBS Services segment completed a survey offshore Nigeria, since which the crew has remained idle. Excluding the OBS Services revenue from one year ago, revenues were up 38%. Investments in our multi-client data library are dependent upon the timing of our new venture projects and the availability of underwriting by our customers. We continue to maintain high standards for the underwriting of any new projects, and have sanctioned several new programs in the current year that were originally planned to occur during 2016. Our “asset lite” strategy enables us to scale our business to avoid significant fixed costs and to remain financially flexible as we manage the timing and levels of our capital expenditures.

In our E&P Technology & Services segment, our new venture revenues increased related to progress and new sales on our 3-D reimaging programs, as well as 2-D new venture programs that met our conservative underwriting standards, this increase in new venture revenues was partially offset by a decline in data library sales. We invested \$16.6 million in our multi-client data library during the first three quarters of 2017 and we expect investments in our multi-client data library to be in a range of \$20 million to \$30 million for 2017, compared to the \$14.9 million invested in 2016.

As of September 30, 2017, our E&P Technology & Services segment backlog, which consists of commitments for (i) data processing work and (ii) both multi-client new venture projects and proprietary projects by our Ventures group underwritten by our customers, was \$39.6 million, compared to \$33.9 million at December 31, 2016 and \$29.9 million at September 30, 2016. The growth of backlog was due to ongoing activity in Mexico as well as activity related to several newly sanctioned programs. We anticipate that the majority of our backlog will be recognized as revenue over the next six months.

For the first nine months of 2017, our Ocean Bottom Seismic Services segment continues to be affected by E&P companies delaying or canceling decisions to commit capital to OBS projects, while our crew has remained idle since completion of a survey offshore Nigeria in the third quarter 2016. Despite political issues and uncertainty, we see significant long-term potential for OceanGeo and our technologies to improve OBS productivity, and we expect demand for OBS surveys to increase.

Our seismic contractor customers are also experiencing weakened demand due to the reduction in seismic spending by their oil company customers. Since early 2014, seismic contractors have taken approximately 35 seismic vessels, or about 29% of the fleet, out of the market, contributing to slightly lower E&P Operations Optimization segment sales year-over-year.

We continue to monitor the global economy, the demand for crude oil and natural gas and the resulting impact on the capital spending plans and operations of our E&P customers to plan our business. During late 2014 and continuing through mid-2016, we reduced our workforce by over 60%, and closed selected facilities. Our workforce has since stabilized. These actions are expected to result in annualized cash savings of approximately \$95 million which we began to fully realize in 2017. We remain confident that, despite current marketplace challenges described above, we have positioned ourselves to take advantage of the next E&P market upturn by reducing our cost structure to reflect our revenue base, shifting our focus more toward E&P solutions and less on equipment sales, and by diversifying our offerings across the E&P lifecycle.

It is our view that technologies that provide a competitive advantage through improved imaging, lower costs, higher productivity, or enhanced safety will continue to be valued in our marketplace. We believe that our newest technologies, such as Marlin and 4Sea, will continue to attract customer interest, because these technologies are designed to deliver those desirable qualities.

### ***WesternGeco Litigation***

A more in depth treatment of the WesternGeco Litigation is set forth in Footnote 6 “*Litigation*” of *Footnotes to Unaudited Condensed Financial Statements*. As noted in such Footnote, on July 2, 2015, the United States Court of Appeals for the Federal Circuit in Washington, D.C. reversed in part the District Court’s judgment, holding the District Court erred by including lost profits in the Final Judgment. Lost profits were \$93.4 million and prejudgment interest was approximately \$10.9 million of the \$123.8 million Final Judgment. Pre-judgment interest on the lost profits portion will be treated in the same way as the lost profits. Post-judgment interest will likewise be treated in the same fashion. On July 29, 2015, WesternGeco filed a petition for rehearing en banc before the Court of Appeals. On October 30, 2015 the Court of Appeals denied WesternGeco’s petition for rehearing en banc.

On February 26, 2016, WesternGeco filed a petition for writ of certiorari by the Supreme Court. We filed our response on April 27, 2016. Subsequently, on June 20, 2016, the Supreme Court refused to disturb the Court of Appeals ruling finding no lost profits as a matter of law. Separately, in light of the changes in case law regarding the standard of proof for willfulness in the Halo and Stryker cases, the Supreme Court indicated that the case should be remanded to the Federal Circuit for a determination of whether or not the willfulness determination by the District Court was appropriate.

On November 14, 2016, the District Court issued an order reducing the amount of the appeal bond from \$120.0 million to \$65.0 million, ordered the sureties to pay principal and interest on the royalty previously awarded and declined to issue a final judgment until after consideration of whether enhanced damages related to willfulness should be awarded in the case. While we did not agree with the unusual decision by the District Court ordering payment of the royalty damages and interest without a final judgment, we paid the \$20.8 million due pursuant to the order to WesternGeco on November 25, 2016.

On March 14, 2017, the District Court held a hearing on whether or not additional damages for willfulness would be payable. The Judge found that ION’s infringement was willful, based on his perception that ION did not adequately investigate the scope of the patent, and ION’s conduct during trial. However, he limited enhanced damages to \$5.0 million because it was a “close case,” there was no evidence of copying, and ION was simply acting as a competitor in a capitalist marketplace. The District Court also ordered the appeal bond to be released and discharged. The Court’s findings were memorialized in an order issued on May 16, 2017. On June 30, 2017, WesternGeco and we jointly agreed that neither party would appeal the District Court’s award of \$5.0 million in enhanced damages. The parties also agreed that the \$5.0 million would be paid over the course of 12 months with \$1.25 million being paid in two installments of \$0.625 million in 2017 and the remaining \$3.75 million being paid in three quarterly payments of \$1.25 million beginning January 1, 2018. This agreement was memorialized by the court in an order issued on July 26, 2017.

WesternGeco filed a second petition for writ of certiorari in the U.S. Supreme Court on February 17, 2017, appealing the lost profits issue again. We filed our response to WesternGeco’s second attempt to appeal to the Supreme Court the lost profits issue, raising both the substantive matters we addressed by opposing WesternGeco’s first petition, and also raising a procedural argument that WesternGeco cannot raise the same issue for a second time in a second petition for certiorari. On May 30, 2017, the Supreme Court called for the views of the U.S. Solicitor General regarding whether or not to grant certiorari. (The U.S. Supreme Court has discretion to hear, or not hear, WesternGeco’s appeal; granting WesternGeco’s request for a writ of certiorari would mean that the U.S. Supreme Court decided to hear WesternGeco’s appeal of the decision by the United States Court of Appeals for the Federal Circuit with respect to the lost profits issue. If the Supreme Court agrees to hear WesternGeco’s appeal, we will contest WesternGeco’s appeal at the Supreme Court. In such a case, it is possible that the Supreme Court could issue a ruling adverse to ION.) We and WesternGeco each met with the Solicitor General’s office in late July, 2017. The Solicitor General is expected to issue its brief as to whether the Supreme Court should grant certiorari near the end of 2017 or the beginning of 2018, although there is no deadline for the Solicitor General to issue such an opinion.

## Key Financial Metrics

The table below provides an overview of key financial metrics for our company as a whole and our three business segments for the three and nine months ended September 30, 2017, compared to the same period of 2016 (in thousands, except share data).

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net revenues:				
E&P Technology & Services:				
New Venture	\$ 43,542	\$ 8,393	\$ 70,477	\$ 16,278
Data Library	5,044	21,510	25,360	32,057
Total multi-client revenues	48,586	29,903	95,837	48,335
Imaging Services	3,468	6,134	13,409	19,338
Total	52,054	36,037	109,246	67,673
E&P Operations Optimization:				
Devices	5,260	8,679	17,929	20,664
Optimization Software & Services	3,781	3,922	12,477	12,685
Total	9,041	12,601	30,406	33,349
Ocean Bottom Seismic Services	—	29,984	—	36,417
Total	\$ 61,095	\$ 78,622	\$ 139,652	\$ 137,439
Gross profit (loss):				
E&P Technology & Services	\$ 28,533	\$ 12,888	\$ 44,464	\$ (418)
E&P Operations Optimization	4,055	6,866	15,100	16,647
Ocean Bottom Seismic Services	(2,479)	12,011	(7,736)	11,459
Total	\$ 30,109	\$ 31,765	\$ 51,828	\$ 27,688
Gross margin:				
E&P Technology & Services	55 %	36 %	41 %	(1)%
E&P Operations Optimization	45 %	54 %	50 %	50 %
Ocean Bottom Seismic Services	—%	40 %	—%	31 %
Total	49 %	40 %	37 %	20 %
Income (loss) from operations:				
E&P Technology & Services	\$ 22,695	\$ 7,259	\$ 27,952	\$ (16,867)
E&P Operations Optimization	998	3,682	5,569	7,162
Ocean Bottom Seismic Services	(4,432)	9,320	(12,300)	2,053
Support and other	(9,325)	(8,397)	(28,769)	(27,201)
Income (loss) from operations	\$ 9,936	\$ 11,864	\$ (7,548)	\$ (34,853)
Operating margin:				
E&P Technology & Services	44 %	20 %	26 %	(25)%
E&P Operations Optimization	11 %	29 %	18 %	21 %
Ocean Bottom Seismic Services	—%	31 %	—%	6 %
Support and other	(15)%	(11)%	(21)%	(20)%
Total	16 %	15 %	(5)%	(25)%
Net income (loss) attributable to ION	\$ 4,935	\$ 1,699	\$ (28,848)	\$ (58,657)
Net income (loss) per share:				
Basic	\$ 0.42	\$ 0.14	\$ (2.43)	\$ (5.21)
Diluted	\$ 0.41	\$ 0.14	\$ (2.43)	\$ (5.21)
Special Items				
	—	—	5,000	4,191
Net income (loss) attributable to ION as adjusted	\$ 4,935	\$ 1,699	\$ (23,848)	\$ (54,466)
Net income (loss) per share as adjusted:				
Basic	\$ 0.42	\$ 0.14	\$ (2.01)	\$ (4.83)
Diluted	\$ 0.41	\$ 0.14	\$ (2.01)	\$ (4.83)

<sup>(a)</sup> Represents a loss contingency accrual related to legal proceedings. See footnote 6 "Litigation" of Footnotes to Consolidated Financial Statements.

(b) Represents severance charges of \$2.0 million and \$2.2 million on extinguishment of debt associated with our second quarter 2016 bond exchange.

We intend that the following discussion of our financial condition and results of operations will provide information that will assist in understanding our consolidated financial statements, the changes in certain key items in those financial statements from period to period, and the primary factors that accounted for those changes.

For a discussion of factors that could impact our future operating results and financial condition, see (i) Item 1A. “*Risk Factors*” in our Annual Report on Form 10-K for the year ended December 31, 2016, and (ii) Item 1A. “*Risk Factors*” in Part II of this Form 10-Q.

## Results of Operations

### Three Months Ended September 30, 2017 Compared to Three Months Ended September 30, 2016

Our consolidated net revenues of \$61.1 million for the three months ended September 30, 2017 (the “Current Quarter”) decreased by \$17.5 million, or (22)%, compared to total net revenues of \$78.6 million for the three months ended September 30, 2016 (the “Comparable Quarter”). Excluding the OBS Services revenues from the third quarter 2016; OBS Services crew was idle throughout 2017; all other segment revenues were up 26% compared to the third quarter 2016. Our overall gross margin was 49% in the Current Quarter, as compared to 40% in the Comparable Quarter. For the Current Quarter, our income from operations was \$9.9 million, compared to a income of \$11.9 million for the Comparable Quarter.

Net income for the Current Quarter was \$4.9 million, or \$0.41 per diluted share, compared to \$1.7 million, or \$0.14 per diluted share, for the Comparable Quarter, which includes OBS operations.

### Net Revenues, Gross Profits and Gross Margins

*E&P Technology & Services* — Net revenues for the Current Quarter increased by \$16.1 million, or 44%, to \$52.1 million, compared to \$36.0 million for the Comparable Quarter. The increase in revenues was primarily due to continued revenue from our 3-D multi-client reimagining programs offshore Mexico and Brazil, as well as revenues from new 2-D multi-client programs that have recently been launched. These increases were partially offset by a decline in our data library sales, primarily related to a significant one-time purchase by a customer in the third quarter 2016 that did not reoccur in the third quarter 2017, as well as a decrease in imaging services as a result of the shift we made to higher return multi-client new ventures programs. The Current Quarter reflects a gross profit of \$28.5 million, representing a 55% gross margin, improving \$15.6 million as compared to a gross profit of \$12.9 million, which represented a 36% gross margin in the Comparable Quarter. These improvements in gross profit and margin were due to the increase in revenues and due to a mix of higher margin 3-D reimagining programs as noted above and our cost control initiatives implemented in 2014 and continued through 2016.

*E&P Operations Optimization* — Devices net revenues for the Current Quarter decreased by \$3.4 million, or 39%, to \$5.3 million, compared to \$8.7 million for the Comparable Quarter. Revenues continue to be impacted by reduced activity by seismic contractors as numerous vessels have been taken out of service. Optimization Software & Services net revenues for the third quarter decreased by \$0.1 million, or 3% to \$3.8 million, compared to \$3.9 million for the Comparable Quarter. Gross margin was 45% for the Current Quarter, compared to 54% for the Comparable Quarter. The decline in gross margin was due to a higher mix of lower margin sales in the current quarter.

*Ocean Bottom Seismic Services* — Net revenues for the Current Quarter were zero compared to \$30.0 million for Comparable Quarter due to the OBS survey offshore Nigeria in 2016. In 2017, the crew remains idle. Gross loss for the Current Quarter was \$2.5 million, compared to gross income of \$12.0 million for the Comparable Quarter, due to the reduction in revenue.

### Operating Expenses

*Research, Development and Engineering* — Research, development and engineering expense increased \$0.2 million, or 5%, to \$4.4 million, for the Current Quarter, compared to \$4.2 million for the Comparable Quarter. During the current down-cycle in E&P exploration spending, we have been selective in spending on research and development (“R&D”) projects in order to reduce expenses without sacrificing our ability to develop our technologies. As discussed above, despite the extended market downturn and uncertainty, we see significant long-term potential for OceanGeo and our technologies to improve OBS productivity. We continue to invest in our 4Sea system and we expect long-term demand for OBS production surveys (4-D) to increase.

*Marketing and Sales* — Marketing and sales expense increased \$0.9 million, or 19%, to \$5.6 million, for the Current Quarter, compared to \$4.7 million for the Comparable Quarter primarily due to higher commissions driven by increased sales in the E&P Technology & Services segment.

*General, Administrative and Other Operating Expenses* — General, administrative and other operating expenses decreased \$0.9 million, or 8%, to \$10.1 million, for the Current Quarter, compared to \$11.0 million for the Comparable Quarter. These improvements were due to our cost control initiatives implemented 2014 and continued through 2016.

#### **Other Items**

*Interest Expense, net* — Interest expense, net, was \$4.0 million for the Current Quarter compared to \$4.6 million for the Comparable Quarter. Interest expense decreased slightly due to lower principal debt balances resulting from the bond exchange in the second quarter 2016. For additional information, please refer to “*Liquidity and Capital Resources — Sources of Capital*” below.

*Other Income (Expense), Net* — Other income for the Current Quarter was \$0.7 million compared to other expense of \$2.0 million for the Comparable Quarter. This difference was related to foreign currency losses, primarily due to transaction losses to the portion of Ocean Bottom Services revenue recorded in Nigerian Naira during the Comparable Quarter.

*Income Tax Expense* — Income tax expense for the Current Quarter was \$1.7 million compared to \$3.3 million for the Comparable Quarter. Our effective tax rates for the Current Quarter and Comparable Quarter were 25.2% and 63.4%, respectively. The income tax expense for the Current Quarter and Comparable Quarter primarily relates to results generated by our non-U.S. businesses. Our effective tax rate for the Current Quarter was negatively impacted by the change in valuation allowance related to U.S. operating losses for which we cannot currently recognize a tax benefit. See further discussion of establishment of the deferred tax valuation allowance at Footnote 5 “*Income Taxes*” of *Notes to Unaudited Condensed Consolidated Financial Statements*.

#### **Nine Months Ended September 30, 2017 Compared to Nine Months Ended September 30, 2016**

Our consolidated net revenues of \$139.7 million for the nine months ended September 30, 2017 (the “Current Period”) increased by \$2.2 million, or 2%, compared to total net revenues of \$137.4 million for the nine months ended September 30, 2016 (the “Comparable Period”). Excluding the OBS Services revenues from the nine months of 2016; OBS Services crew was idle throughout 2017; all other segment revenues were up 38% compared to the nine months of 2016. Our overall gross profit percentage for the Current Period was 37%, compared to 20%, for the Comparable Period. For the Current Period, our loss from operations was \$7.5 million, compared to \$34.9 million, for the Comparable Period.

Net loss for the Current Period was \$28.8 million, or \$(2.43) per share, compared to a net loss of \$58.7 million, or \$(5.21) per share, in the Comparable Period. Excluding the impact of special items, as noted in the above table, adjusted net loss for Current Period was \$23.8 million, or \$(2.01) per share compared to adjusted net loss of \$54.5 million, or \$(4.83) per share, in the Comparable Period.

#### **Net Revenues, Gross Profits and Gross Margins**

*E&P Technology & Services* — Net revenues for the Current Period increased by \$41.6 million, or 61%, to \$109.2 million, compared to \$67.7 million for the Comparable Period. The change in revenues during the Current Period is fairly consistent with the changes as described for the Current Quarter as discussed above. Gross profit increased by \$44.9 million to a gross profit of \$44.5 million, representing a 41% gross margin, compared to a gross loss of \$0.4 million, representing a (1)% gross margin, in the Comparable Period. These improvements in gross profit and margin were due to the increase in revenues and due to a mix of higher margin 3-D reimaging programs as noted above and our cost control initiatives implemented in 2014 and continued through 2016.

*E&P Operations Optimization* — Devices net revenues for the Current Period decreased by \$2.7 million, or 13%, to \$17.9 million, compared to \$20.7 million for the Comparable Period. Revenues continue to be impacted by reduced activity by seismic contractors as numerous vessels have been taken out of service; reduced revenues have been partially offset by new system sales to non-traditional customers for scientific and military applications and from incremental sales of recently commercialized products. Optimization Software & Services net revenues for the Current Periods decreased by \$0.2 million, or 2%, to \$12.5 million compared to \$12.7 million for the Comparable Period. Excluding the effect of foreign currencies, Optimization Software & Services revenues were up 6% in terms of local GBP currency. Gross profit decreased by \$1.5 million to \$15.1 million, representing a 50% gross margin, for the Current Period compared to \$16.6 million, representing a 50% gross margin, for the Comparable Period. Gross profits decreased due to lower sales as noted above, while the gross margin remained consistent the the Comparable Period.

*Ocean Bottom Services* — Net revenues for the Current Period were zero compared to \$36.4 million for the Comparable Period due to the OBS survey offshore Nigeria in 2016. In 2017, the crew remains idle. Gross loss for the Current Period was \$7.7 million compared to gross profit of \$11.5 million for the Comparable Period. The decrease in gross profit corresponds to the decrease in revenues as described above.

### **Operating Expenses**

*Research, Development and Engineering* — Research, development and engineering expense was \$12.0 million for the Current Period, a decrease of \$2.6 million, or 18%, compared to \$14.6 million for the Comparable Period. During the current down-cycle in E&P exploration spending, we have been selective in spending on research and development (“R&D”) projects in order to reduce expenses without sacrificing our ability to develop our technologies. As discussed above, despite the extended market downturn and uncertainty, we see significant long-term potential for OceanGeo and our technologies to improve OBS productivity. We continue to invest in our 4Sea system and we expect long-term demand for OBS production surveys (4-D) to increase.

*Marketing and Sales* — Marketing and sales expense was \$15.1 million for the Current Period, an increase of \$1.7 million, or 13%, compared to \$13.4 million, for the Comparable Period, primarily due to higher commissions driven by increased sales in the E&P Technology & Services segment.

*General, Administrative and Other Operating Expenses* — General, administrative and other operating expenses were \$32.3 million for the Current Period, a decrease of \$2.3 million, or 7%, compared to \$34.6 million for the Comparable Period. This decrease was primarily due to the benefit of our cost control initiatives, implemented in 2014 and continued through 2016.

### **Other Items**

*Interest Expense, net* — Interest expense, net, was \$12.7 million for the Current Period compared to \$14.0 million for the Comparable Period. Interest expense decreased due to lower debt balances resulting from the bond exchange in the second quarter 2016. For additional information, please refer to “*Liquidity and Capital Resources — Sources of Capital*” below.

*Other Expense, Net* — Other expense for the Current Period was \$4.2 million compared to other expense of \$3.6 million for the Comparable Period. This difference was primarily related to an increase in our loss contingency accrual related to the WesternGeco legal proceedings of \$5.0 million in the current period, compared to a loss of \$2.2 million on the exchange of bonds during the Comparable Period.

*Income Tax Expense* — Income tax expense for the Current Period was \$3.7 million compared to \$5.9 million for the Comparable Period. Our effective tax rates for the Current Period and Comparable Period were (15.1)% and (11.2)%, respectively. Our income tax expense for the Current Period and Comparable Periods, were primarily related to results from our non-US businesses. Our effective tax rate for the Current Period was negatively impacted by the change in valuation allowance related to U.S. operating losses for which we cannot currently recognize a tax benefit. See further discussion of establishment of the deferred tax valuation allowance at Footnote 5 “*Income Taxes*” of *Notes to Unaudited Condensed Consolidated Financial Statements*.

## **Liquidity and Capital Resources**

### **Sources of Capital**

As of September 30, 2017, we had \$40.2 million of cash on hand and \$12.1 million of undrawn borrowing base availability under the Credit Facility. Our cash requirements include working capital requirements and cash required for our debt service payments, multi-client seismic data acquisition activities and capital expenditures. As of September 30, 2017, we had working capital of \$(15.8) million, which includes a current liability of \$28.5 million of Senior secured third-priority lien notes that are payable during the second quarter 2018, which we expect to pay at maturity using available liquidity. Working capital requirements are primarily driven by our investment in our multi-client data library (\$16.6 million in the Current Period) and royalty payments for multi-client sales. Also, our headcount has traditionally been a significant driver of our working capital needs. As a significant portion of our business is involved in the planning, processing and interpretation of seismic data services, one of our largest investments is in our employees, which involves cash expenditures for their salaries, bonuses, payroll taxes and related compensation expenses. During late 2014 and continuing through mid-2016, we reduced our workforce by over 60%, and closed selected facilities. Our workforce has since stabilized. These actions are expected to result in annualized cash savings of approximately \$95 million which we began to fully realize in 2017.

Our working capital requirements may change from time to time depending upon many factors, including our operating results and adjustments in our operating plan in response to industry conditions, competition and unexpected events. In recent years, our primary sources of funds have been cash flows generated from operations, existing cash balances, debt and equity issuances and borrowings under our revolving credit facilities.

### *Revolving Credit Facility*

In August 2014, we and our material U.S. subsidiaries, GX Technology Corporation, ION Exploration Products (U.S.A.), Inc. and I/O Marine Systems, Inc. (collectively, the “Subsidiary Borrowers”) entered into a Revolving Credit and Security Agreement with PNC Bank, National Association (“PNC”), as agent (the “Original Credit Agreement”), which was amended by the First Amendment to Revolving Credit and Security Agreement in August 2015 (the “First Amendment”) and the Second Amendment to Revolving Credit and Security Agreement in April 2016 (the “Second Amendment”; the Original Credit Agreement, as amended by the First Amendment and the Second Amendment, the “Credit Facility”).

The Credit Facility is available to provide for the Borrowers’ general corporate needs, including working capital requirements, capital expenditures, surety deposits and acquisition financing. The maximum amount of the revolving line of credit under the Credit Facility is the lesser of \$40.0 million and a monthly borrowing base.

The borrowing base under the Credit Facility will increase or decrease monthly using a formula based on certain eligible receivables, eligible inventory and other amounts, including a percentage of the net orderly liquidation value of our multi-client data library (not to exceed \$15.0 million for the multi-client data library component). As of September 30, 2017, the borrowing base under the Credit Facility was \$22.1 million, and there was \$10.0 million of outstanding indebtedness under the Credit Facility. Even though the Company experienced a significant increase in its accounts and unbilled receivables, those increases were part of the Company’s foreign operations which are not included the borrowing base calculation.

The Credit Facility requires us to maintain compliance with various covenants. At September 30, 2017, we were in compliance with all of the covenants under the Credit Facility. For further information regarding our Credit Facility, see Footnote 3 “*Long-term Debt*” of *Footnotes to Unaudited Condensed Financial Statements*.

#### *Senior Secured Notes*

In May 2013, we sold \$175.0 million aggregate principal amount of 8.125% Senior Secured Second-Priority Notes due 2018 (the “Third Lien Notes”) in a private offering pursuant to an indenture dated as of May 13, 2013 (the “Third Lien Notes Indenture”). On April 28, 2016, we successfully completed an exchange offer (the “Exchange Offer”) and consent solicitation (the “Consent Solicitation”) related to the Third Lien Notes. For a complete discussion of the terms of the Exchange Offer and Consent Solicitation, see Footnote 4 to the Financial Statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2016. Prior to the completion of the Exchange Offer and Consent Solicitation on April 28, 2016, the Third Lien Notes were our senior secured second-priority obligations. After giving effect to the Exchange Offer and Consent Solicitation, the remaining aggregate principal amount of approximately \$28.5 million of outstanding Third Lien Notes became our senior secured third-priority obligations subordinated to the liens securing all of our senior and second priority indebtedness, including under the Credit Facility and Second-Priority Lien Notes.

Pursuant to the Exchange Offer and Consent Solicitation, we (i) issued approximately \$120.6 million in aggregate principal amount of our new Second Lien Notes and 1,205,477 shares of common stock, (utilizing 508,464 of treasury shares) in exchange for approximately \$120.6 million in aggregate principal amount of Third Lien Notes, and (ii) purchased approximately \$25.9 million in aggregate principal amount of Third Lien Notes in exchange for aggregate cash consideration totaling approximately \$15.0 million, plus accrued and unpaid interest on the Third Lien Notes from the applicable last interest payment date to, but not including, April 28, 2016.

After giving effect to the Exchange Offer and Consent Solicitation, the aggregate principal amount of the Third Lien Notes remaining outstanding was approximately \$28.5 million and the aggregate principal amount of Second Lien Notes outstanding was approximately \$120.6 million.

The Third Lien Notes are guaranteed by our material U.S. subsidiaries, GX Technology Corporation, ION Exploration Products (U.S.A.), Inc. and I/O Marine Systems, Inc. (the “Guarantors”). The Third Lien Notes mature on May 15, 2018. Interest on the Third Lien Notes accrues at the rate of 8.125% per annum and is payable semiannually in arrears on May 15 and November 15 of each year during their term.

The Third Lien Notes Indenture requires us to maintain compliance with various covenants. At September 30, 2017, we were in compliance with all of the covenants under the Third Lien Notes Indenture.

The Second Lien Notes are senior secured second-priority obligations guaranteed by the Guarantors. The Second Lien Notes mature on December 15, 2021. Interest on the Second Lien Notes accrues at the rate of 9.125% per annum and is payable semiannually in arrears on June 15 and December 15 of each year during their term, except that the interest payment otherwise payable on June 15, 2021, will be payable on December 15, 2021.



The indenture dated April 28, 2016, governing the Second Lien Notes (the “Second Lien Notes Indenture”) contains certain covenants that, among other things, limits or prohibits our ability and the ability of our restricted subsidiaries to take certain actions or permit certain conditions to exist during the term of the Second Lien Notes, including among other things, incurring additional indebtedness, creating liens, paying dividends and making other distributions in respect of our capital stock, redeeming our capital stock, making investments or certain other restricted payments, selling certain kinds of assets, entering into transactions with affiliates, and effecting mergers or consolidations. These and other restrictive covenants contained in the Second Lien Notes Indenture are subject to certain exceptions and qualifications. All of our subsidiaries are currently restricted subsidiaries.

At September 30, 2017, we were in compliance with all of the covenants under the Second Lien Notes Indenture.

On or after December 15, 2019, we may on one or more occasions redeem all or a part of the Second Lien Notes at the redemption prices set forth below, plus accrued and unpaid interest and special interest, if any, on the Second Lien Notes redeemed during the 12-month period beginning on December 15th of the years indicated below:

Date	Percentage
2019	105.500%
2020	103.500%
2021 and thereafter	100.000%

For further information regarding the Second Lien Notes and the Third Lien Notes, see Footnote 4 “*Long-term Debt*” of *Footnotes to Unaudited Condensed Financial Statements*.

#### **Meeting our Liquidity Requirements**

As of September 30, 2017, our total outstanding indebtedness (including capital lease obligations) was approximately \$155.3 million, including approximately \$120.6 million outstanding Second Lien Notes, \$28.5 million outstanding Third Lien Notes, \$10.0 million outstanding indebtedness under our Credit Facility, \$0.5 million of equipment capital leases.

For the Current Period, total capital expenditures, including the investments in our multi-client data library, were \$17.6 million. We expect investments in our multi-client data library this year to be in the range of \$20 million to \$30 million. We expect capital expenditures related to property, plant, equipment and seismic rental assets to be in the range of \$1 million to \$2 million in 2017.

For the Current Period, we paid \$0.6 million of the \$5.0 million litigation accrual we established in the first quarter of 2017. In addition, we reclassified the \$28.5 million outstanding Third Lien Notes to a current liability as this balance matures in the second quarter 2018. With respect to our ongoing WesternGeco litigation and the approaching maturity of our outstanding Third Lien Notes, we believe that our existing cash balance, cash from operations and undrawn availability under our Credit Facility will be sufficient to meet our anticipated cash needs for at least the next 12 months. However, as described at Part II, Item 1. “*Legal Proceedings*,” there are possible scenarios involving an outcome in the WesternGeco lawsuit that could materially and adversely affect our liquidity.

#### ***Cash Flow from Operations***

In the Current Period, we generated \$10.0 million of cash from operating activities compared to \$3.2 million for the Comparable Period. The increase in net cash provided by operations was due to improved operating results, which was partially offset by increases in accounts receivable and unbilled receivables as September 30, 2017.

#### ***Cash Flow from Investing Activities***

Cash used in investing activities was \$17.6 million in the Current Period compared to \$12.2 million for the Comparable Period. The principal uses of cash in our investing activities during the Current Period were \$16.6 million invested in our multi-client data library and \$1.0 million for capital expenditures related to property, plant, equipment and seismic rental assets.

The principal use of cash in our investing activities during the Comparable Period were \$11.6 million invested in our multi-client data library and \$0.6 million for capital expenditures related to property, plant, equipment and seismic rental assets.

#### ***Cash Flow from Financing Activities***

Net cash used in financing activities was \$4.6 million in the Current Period, compared to \$14.3 million in the Comparable Period. The primary use of cash in our financing activities during the Current Period was \$4.3 million of payments of long-term debt, including equipment capital leases.

The net cash used in financing activities during the Comparable Period was primarily related to \$6.7 million of payments of long-term debt, \$6.7 million of costs associated with issuance of debt, \$15.0 million of payments to repurchase bonds, offset by \$15.0 million of borrowings on our revolver.

### **Inflation and Seasonality**

Inflation in recent years has not had a material effect on our cost of goods or labor, or the prices for our products or services. Traditionally, our business has been seasonal, with strongest demand often occurring in the fourth quarter of our fiscal year.

### **Critical Accounting Policies and Estimates**

Refer to our Annual Report on Form 10-K for the year ended December 31, 2016, for a complete discussion of our significant accounting policies and estimates. There have been no material changes in the Current Period regarding our critical accounting policies and estimates. For discussion of recent accounting pronouncements, see Footnote 13 “Recent Accounting Pronouncements” of Footnotes to Unaudited Condensed Consolidated Financial Statements.

### **Foreign Sales Risks**

The majority of our foreign sales are denominated in U.S. dollars. Product revenues are allocated to geographical locations on the basis of the ultimate destination of the equipment, if known. If the ultimate destination of such equipment is not known, product revenues are allocated to the geographical location of initial shipment. Service revenues, which primarily relate to our E&P Technology & Services segment, are allocated based upon the billing location of the customer. For the Current and Comparable Periods, international sales comprised 78% and 79%, respectively, of total net revenues.

The following table is a summary of net revenues by geographic area (in thousands):

	Nine Months Ended September 30,	
	2017	2016
Net revenues by geographic area:		
Latin America	\$ 53,318	\$ 13,323
North America	30,639	28,811
Europe	28,201	34,289
Asia Pacific	15,318	11,777
CIS	7,803	1,480
Africa	2,660	39,995
Middle East	1,713	7,764
Total	<u>\$ 139,652</u>	<u>\$ 137,439</u>

### **Credit Risks**

At September 30, 2017, we had two multi-national oil company customers, each with balances greater than 10% of our total combined accounts and unbilled receivable balances. These customers’ receivable and unbilled balances represented 21%, and 18%, respectively, of our net accounts receivable and unbilled receivables at September 30, 2017. Additionally, there was one multi-national oil company customer that comprised 10% of our total net revenues for the nine months ended September 30, 2017.

The loss of these customers or deterioration in our relationship with these customers could have a material adverse effect on our results of operations and financial condition.

### **Item 3. Quantitative and Qualitative Disclosures about Market Risk**

Refer to Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2016 for a discussion regarding our quantitative and qualitative disclosures about market risk. There have been no material changes to those disclosures during the Current Period.

**Item 4. Controls and Procedures**

*Disclosure Controls and Procedures.* Disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file with or submit to the Securities and Exchange Commission (the “SEC”) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) is recorded, processed, summarized and reported within the time period specified by the SEC’s rules and forms. Disclosure controls and procedures are defined in Rule 13a-15(e) under the Exchange Act, and they include, without limitation, controls and procedures designed to ensure that information required to be disclosed under the Exchange Act is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of September 30, 2017. Based upon that evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective as of September 30, 2017.

*Changes in Internal Control over Financial Reporting.* There was not any change in our internal control over financial reporting that occurred during the three months ended September 30, 2017, which has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## PART II — OTHER INFORMATION

### Item 1. Legal Proceedings

#### *WesternGeco*

In June 2009, WesternGeco L.L.C. (“WesternGeco”) filed a lawsuit against us in the United States District Court for the Southern District of Texas, Houston Division. In the lawsuit, styled *WesternGeco L.L.C. v. ION Geophysical Corporation*, WesternGeco alleged that we had infringed several method and apparatus claims contained in four of its United States patents regarding marine seismic streamer steering devices.

The trial began in July 2012. A verdict was returned by the jury in August 2012, finding that we infringed the claims contained in the four patents by supplying our DigiFIN® lateral streamer control units and the related software from the United States and awarded WesternGeco the sum of \$105.9 million in damages, consisting of \$12.5 million in reasonable royalty and \$93.4 million in lost profits.

In June 2013, the presiding judge entered a Memorandum and Order, ruling that WesternGeco is entitled to be awarded supplemental damages for the additional DigiFIN units that were supplied from the United States before and after the trial that were not included in the jury verdict due to the timing of the trial. In October 2013, the judge entered another Memorandum and Order, ruling on the number of DigiFIN units that are subject to supplemental damages and also ruling that the supplemental damages applicable to the additional units should be calculated by adding together the jury’s previous reasonable royalty and lost profits damages awards per unit, resulting in supplemental damages of \$73.1 million.

In April 2014, the judge entered another Order, ruling that lost profits should not have been included in the calculation of supplemental damages in the October 2013 Memorandum and Order and reduced the supplemental damages award in the case from \$73.1 million to \$9.4 million. In the Order, the judge also further reduced the damages award in the case by \$3.0 million to reflect a settlement and license that WesternGeco entered into with a customer of ours that had purchased and used DigiFIN units that were also included in the damage amounts awarded against us.

In May 2014, the judge signed and entered a Final Judgment in the amount of \$123.8 million related to the case. The Final Judgment also included an injunction that enjoins us, our agents and anyone acting in concert with us, from supplying in or from the United States the DigiFIN product or any parts unique to the DigiFIN product, or any instrumentality no more than colorably different from any of these products or parts, for combination outside of the United States. We have conducted our business in compliance with the district court’s orders in the case, and we have reorganized our operations such that we no longer supply the DigiFIN product or any part unique to the DigiFIN product in or from the United States.

We and WesternGeco each appealed the Final Judgment to the United States Court of Appeals for the Federal Circuit in Washington, D.C. On July 2, 2015, the Court of Appeals reversed in part the District Court’s judgment, holding the District Court erred by including lost profits in the Final Judgment. Lost profits were \$93.4 million and prejudgment interest was approximately \$10.9 million of the \$123.8 million Final Judgment. Pre-judgment interest on the lost profits portion will be treated in the same way as the lost profits. Post-judgment interest will likewise be treated in the same fashion. On July 29, 2015, WesternGeco filed a petition for rehearing en banc before the Court of Appeals. On October 30, 2015, the Court of Appeals denied WesternGeco’s petition for rehearing en banc.

On February 26, 2016, WesternGeco filed a petition for writ of certiorari by the Supreme Court. We filed our response on April 27, 2016. Subsequently, on June 20, 2016, the Supreme Court refused to disturb the Court of Appeals ruling finding no lost profits as a matter of law. Separately, in light of the changes in case law regarding the standard of proof for willfulness in the Halo and Stryker cases, the Supreme Court indicated that the case should be remanded to the Federal Circuit for a determination of whether or not the willfulness determination by the District Court was appropriate.

On November 14, 2016, the District Court issued an order reducing the amount of the appeal bond from \$120.0 million to \$65.0 million, ordered the sureties to pay principal and interest on the royalty previously awarded and declined to issue a final judgment until after consideration of whether enhanced damages related to willfulness should be awarded in the case. While we did not agree with the unusual decision by the District Court ordering payment of the royalty damages and interest without a final judgment, we paid the \$20.8 million due pursuant to the order to WesternGeco on November 25, 2016.

On March 14, 2017, the District Court held a hearing on whether or not additional damages for willfulness would be payable. The Judge found that ION's infringement was willful, based on his perception that ION did not adequately investigate the scope of the patent, and ION's conduct during trial. However, he limited enhanced damages to \$5.0 million because it was a "close case," there was no evidence of copying, and ION was simply acting as a competitor in a capitalist marketplace. The District Court also ordered the appeal bond to be released and discharged. The Court's findings were memorialized in an order issued on May 16, 2017. On June 30, 2017, WesternGeco and we jointly agreed that neither party would appeal the District Court's award of \$5.0 million in enhanced damages. The parties also agreed that the \$5.0 million would be paid over the course of twelve months with \$1.25 million being paid in two installments of \$0.625 million in 2017 and the remaining \$3.75 million being paid in three quarterly payments of \$1.25 million beginning January 1, 2018. This agreement was memorialized by the court in an order issued on July 26, 2017.

WesternGeco filed a second petition for writ of certiorari in the U.S. Supreme Court on February 17, 2017, appealing the lost profits issue again. We filed our response to WesternGeco's second attempt to appeal to the Supreme Court the lost profits issue, raising both the substantive matters we addressed by opposing WesternGeco's first petition, and also raising a procedural argument that WesternGeco cannot raise the same issue for a second time in a second petition for certiorari. On May 30, 2017, the Supreme Court called for the views of the U.S. Solicitor General regarding whether or not to grant certiorari. (The U.S. Supreme Court has discretion to hear, or not hear, WesternGeco's appeal; granting WesternGeco's request for a writ of certiorari would mean that the U.S. Supreme Court decided to hear WesternGeco's appeal of the decision by the United States Court of Appeals for the Federal Circuit with respect to the lost profits issue. If the Supreme Court agrees to hear WesternGeco's appeal, we will contest WesternGeco's appeal at the Supreme Court. In such a case, it is possible that the Supreme Court could issue a ruling adverse to ION.) We and WesternGeco each met with the Solicitor General's office in late July, 2017. The Solicitor General is expected to issue its brief as to whether the Supreme Court should grant certiorari near the end of 2017 or the beginning of 2018, although there is no deadline for the Solicitor General to issue such an opinion. See Footnote 6 "*Litigation*" of *Footnotes to Unaudited Condensed Financial Statements*.

#### ***Other Litigation***

We have been named in various other lawsuits or threatened actions that are incidental to our ordinary business. Litigation is inherently unpredictable. Any claims against us, whether meritorious or not, could be time-consuming, cause us to incur costs and expenses, require significant amounts of management time and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. We currently believe that the ultimate resolution of these matters will not have a material adverse effect on our financial condition or results of operations or our liquidity.

#### **Item 1A. Risk Factors**

This report contains or incorporates by reference statements concerning our future results and performance and other matters that are "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended ("Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended ("Exchange Act"). These statements involve known and unknown risks, uncertainties, and other factors that may cause our or our industry's results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "would," "should," "intend," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," or "continue" or the negative of such terms or other comparable terminology. Examples of other forward-looking statements contained or incorporated by reference in this report include statements regarding:

- any additional damages or adverse rulings in the WesternGeco litigation and future potential adverse effects on our liquidity;
- future levels of capital expenditures of our customers for seismic activities;
- future oil and gas commodity prices;
- the effects of current and future worldwide economic conditions (particularly in developing countries) and demand for oil and natural gas and seismic equipment and services;
- future cash needs and availability of cash to fund our operations and pay our obligations;
- the effects of current and future unrest in the Middle East, North Africa, Korea and other regions;
- the timing of anticipated revenues and the recognition of those revenues for financial accounting purposes;
- the effects of ongoing and future industry consolidation, including, in particular, the effects of consolidation and vertical integration in the towed marine seismic streamers market;

- the timing of future revenue realization of anticipated orders for multi-client survey projects and data processing work in our E&P Technology & Services segment;
- future levels of our capital expenditures;
- future government regulations pertaining to the oil and gas industry;
- expected net revenues, income from operations and net income;
- expected gross margins for our services and products;
- future benefits to be derived from our OceanGeo subsidiary;
- future seismic industry fundamentals, including future demand for seismic services and equipment;
- future benefits to our customers to be derived from new services and products;
- future benefits to be derived from our investments in technologies, joint ventures and acquired companies;
- future growth rates for our services and products;
- the degree and rate of future market acceptance of our new services and products;
- expectations regarding E&P companies and seismic contractor end-users purchasing our more technologically-advanced services and products;
- anticipated timing and success of commercialization and capabilities of services and products under development and start-up costs associated with their development;
- future opportunities for new products and projected research and development expenses;
- expected continued compliance with our debt financial covenants;
- expectations regarding realization of deferred tax assets;
- anticipated results with respect to certain estimates we make for financial accounting purposes; and
- compliance with the U.S. Foreign Corrupt Practices Act and other applicable U.S. and foreign laws prohibiting corrupt payments to government officials and other third parties.

These forward-looking statements reflect our best judgment about future events and trends based on the information currently available to us. Our results of operations can be affected by inaccurate assumptions we make or by risks and uncertainties known or unknown to us. Therefore, we cannot guarantee the accuracy of the forward-looking statements. Actual events and results of operations may vary materially from our current expectations and assumptions.

Information regarding factors that may cause actual results to vary from our expectations, referred to as “risk factors,” appears in our Annual Report on Form 10-K for the year ended December 31, 2016, in Part I, Item 1A. “Risk Factors,” as previously filed with the SEC, as well as the following additional risk factors.

***If we cannot meet the continued listing requirements of the New York Stock Exchange (the “NYSE”), the NYSE may delist our common shares, which would have an adverse impact on the trading volume, liquidity and market price of our common shares.***

On July 20, 2017, ION Geophysical Corporation (the “Company”) received written notice from the New York Stock Exchange (the “NYSE”) that it is not in compliance with the continued listing standards set forth in Section 802.01B of the NYSE Listed Company Manual. The Company is considered below criteria established by the NYSE for continued listing because its average market capitalization was less than \$50 million over a consecutive 30 trading-day period, and at the same time its last reported stockholders’ equity was below \$50 million.

On August 28, 2017, the Company submitted a plan to the NYSE to demonstrate the Company’s ability to bring the Company into conformity with the continued listing standards within 18 months of the date of the NYSE’s initial notice. On October 5, 2017, the NYSE notified the Company that the NYSE had accepted the Company’s plan. Accordingly, the Company is subject to ongoing monitoring for compliance with the plan.

During the 18-month period, the Company’s shares will continue to be listed and traded on the NYSE, subject to its continued compliance with the plan and other NYSE continued listing standards. The Company can provide no assurances that it will be able to satisfy any of the steps outlined above and maintain a listing of its shares.

There is no immediate impact on the listing of the Company’s common stock, which will continue to trade on the NYSE, subject to the Company’s compliance with other listing standards. The Company will continue to file periodic and other reports with the SEC under applicable federal securities laws.

A delisting of our common shares from the NYSE would negatively impact us because it would: (i) reduce the liquidity and market price of our common shares; (ii) reduce the number of investors willing to hold or acquire our common shares, which could negatively impact our ability to raise equity financing; (iii) limit our ability to use a registration statement to offer and sell freely tradable securities, thereby preventing us from accessing the public capital markets, and (iv) impair our ability to provide equity incentives to our employees.

***We face a significant debt maturity in 2018.***

Our \$28.5 million aggregate principal amount of Senior Secured Third-Priority Lien notes mature on May 15, 2018. If our cash flows from operations and other capital resources are insufficient to pay off such notes, we may face substantial liquidity problems and may be forced to reduce or delay investments, dispose of material assets or operations, or issue additional debt or equity. We may not be able to take such actions, if necessary, on commercially reasonable terms or at all. Our inability to generate sufficient cash flows to satisfy our debt obligations, or to refinance our indebtedness on commercially reasonable terms or at all, would materially and adversely affect our financial position and results or operations.

**Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds***

*Stock Repurchase Program*

On November 4, 2015, our board of directors approved a stock repurchase program authorizing us to repurchase, from time to time from November 10, 2015 through November 10, 2017, up to \$25 million in shares of our outstanding common stock. Since the program's inception on November 10, 2015 through September 30, 2017, we had repurchased 451,792 shares our common stock at an average price per share of \$6.41, and we have approximately \$22 million of remaining authorized capacity available pursuant to the repurchase program. We do not expect to repurchase any additional shares prior to the expiration of the program on November 10, 2017. For further information regarding the Stock Repurchase Program, see Footnote 12 "*Stockholder's Equity, Stock-Based Compensation Expense and Repurchase Plan.*" of *Footnotes to Unaudited Condensed Financial Statements*.

*At-The-Market Equity Offering Program*

On December 22, 2016 we announced that we filed a prospectus supplement under which we could have sold up to \$20 million of our common stock through an "at-the-market" equity offering program (the "ATM Program"). We intended to use the net proceeds from sales under the ATM Program to be positioned to capitalize on opportunities such as acquiring complementary distressed assets, or other value-added transactions. Effective May 2, 2017, we terminated and canceled the ATM Program. No shares were sold pursuant to the ATM Program.

**Item 5. *Other Information***

None.

**Item 6. Exhibits**

- 31.1 Certification of Chief Executive Officer Pursuant to Rule 13a-14(a).
- 31.2 Certification of Chief Financial Officer Pursuant to Rule 13a-14(a).
- 32.1 Certification of Chief Executive Officer Pursuant to 18 U.S.C. §1350.
- 32.2 Certification of Chief Financial Officer Pursuant to 18 U.S.C. §1350.
- 101 The following materials are formatted in Extensible Business Reporting Language (XBRL): (i) Condensed Consolidated Balance Sheets as of September 30, 2017 and December 31, 2016, (ii) Condensed Consolidated Statements of Operations for the three- and nine-months ended September 30, 2017 and 2016, (iii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three- and nine-months ended September 30, 2017 and 2016, (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2017 and 2016, (v) Footnotes to Unaudited Condensed Consolidated Financial Statements.





## EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
31.1	<a href="#"><u>Certification of Chief Executive Officer Pursuant to Rule 13a-14(a).</u></a>
31.2	<a href="#"><u>Certification of Chief Financial Officer Pursuant to Rule 13a-14(a).</u></a>
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**CERTIFICATION OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO RULE 13a-14(a) OR RULE 15d-14(a)**

I, R. Brian Hanson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended September 30, 2017, of ION Geophysical Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2017

/s/ R. Brian Hanson

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R. Brian Hanson

President and Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER  
PURSUANT TO RULE 13a-14(a) OR RULE 15d-14(a)**

I, Steven A. Bate, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended September 30, 2017, of ION Geophysical Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2017

/s/ Steven A. Bate

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Steven A. Bate

Executive Vice President and Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO 18 U.S.C. §1350**

In connection with the Quarterly Report of ION Geophysical Corporation (the “Company”) on Form 10-Q for the period ended September 30, 2017, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, R. Brian Hanson, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 2, 2017

/s/ R. Brian Hanson

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R. Brian Hanson

President and Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER  
PURSUANT TO 18 U.S.C. §1350**

In connection with the Quarterly Report of ION Geophysical Corporation (the "Company") on Form 10-Q for the period ended September 30, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Steven A. Bate, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 2, 2017

/s/ Steven A. Bate

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Steven A. Bate

Executive Vice President and Chief Financial Officer

