ION GEOPHYSICAL CORP
Form 10-K/A
February 12, 2018

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
Form 10-K/A
(Amendment No.1)

(Mark One)
þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 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	22-2286646
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

2105 CityWest Blvd
Suite 100
Houston, Texas 77042-2839
(Address of Principal Executive Offices, Including Zip Code)
(281) 933-3339
(Registrant’s Telephone Number, Including Area Code)
Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.01 par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No þ
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act Yes ¨ No þ
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 þ 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 þ No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨
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	o	Accelerated filer	o
Non-accelerated filer	o (Do not check if a smaller reporting company)	Smaller reporting company	ý
		Emerging growth company	o

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 Act). Yes ¨ No þ

As of June 30, 2017 (the last business day of the registrant's second quarter of fiscal 2017), the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $45.3 million based on the closing sale price per share ($4.35) on such date as reported on the New York Stock Exchange.

As of February 6, 2018, the number of shares of common stock, $0.01 par value, outstanding was 12,022,201 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Portions of the registrant's definitive Proxy Statement for its Annual Meeting of Stockholders scheduled to be held on May 17, 2018, to be filed pursuant to Regulation 14A	Part III

EXPLANATORY NOTE

ION Geophysical Corporation is filing this Amendment No. 1 on Form 10-K/A ("Form 10-K/A") to its Annual Report on Form 10-K for the year ended December 31, 2017 as filed with the Securities and Exchange Commission on February 8, 2018 (the "Original Filing") solely (i) to file an amended Item 8 to correct the inadvertent omission during the edgarization process of paragraph headers in Grant Thornton LLP's opinion on the financial statements, and (ii) to file an amended Item 9A to correct the inadvertent omission during the edgarization process of paragraph headers in Grant Thornton LLP's opinion on internal control over financial reporting.
Except as expressly set forth above, this 10-K/A does not, and does not purport to, amend, update, or restate the information in any other item of the Original Filing. Nothing within this 10-K/A has re-stated or altered the financials contained in the Original Filing in any manner. This 10-K/A does not affect the XBRL data in the Original Filing.

Item 9A. Controls and Procedures

(a) Evaluation of 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 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 December 31, 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 December 31, 2017.

(b) Management’s Report on Internal Control Over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our internal control over financial reporting is designed 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. Our internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of our company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of our company are being made only in accordance with authorizations of our management and directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we assessed the effectiveness of our internal control over financial reporting as of December 31, 2017 based upon criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The independent registered public accounting firm that has also audited our consolidated financial statements included in this Annual Report on Form 10-K has issued an audit report on our internal control over financial reporting. This report appears below.

(c) 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 December 31, 2017, which has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
ION Geophysical Corporation

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting of ION Geophysical Corporation (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2017, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in the 2013 Internal Control-Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements of the Company as of and for the year ended December 31, 2017, and our report dated February 8, 2018 expressed an unqualified opinion on those financial statements.

Basis for opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and limitations of internal control over financial reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ GRANT THORNTON LLP
Houston, Texas
February 8, 2018

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Item 8. Financial Statements and Supplementary Data

The financial statements and related notes thereto required by this item begin at page F-1 hereof.

Item 15. Exhibits and Financial Statement Schedules
(a) List of Documents Filed
(1) Financial Statements
The financial statements filed as part of this report are listed in the “Index to Consolidated Financial Statements” on page F-1 hereof.
(2) Financial Statement Schedules
The following financial statement schedule is listed in the “Index to Consolidated Financial Statements” on page F-1 hereof, and is included as part of this Annual Report on Form 10-K:
Schedule II — Valuation and Qualifying Accounts
All other schedules are omitted because they are not applicable or the requested information is shown in the financial statements or noted therein.
(3) Exhibits

3.1	—	Restated Certificate of Incorporation, as amended, filed on November 3, 2016 as Exhibit 3.1 to the Company’s Quarterly Report on Form 10-Q and incorporated by reference.
3.2	—	Amended and Restated Bylaws of ION Geophysical Corporation filed on September 24, 2007 as Exhibit 3.5 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.1	—	Indenture, dated May 13, 2013, among ION Geophysical Corporation, the subsidiary guarantors named therein, Wilmington Trust, National Association, as trustee, and U.S. Bank National Association, as collateral agent, filed on May 13, 2013 as Exhibit 4.1 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.2		First Supplemental Indenture, dated as of April 28, 2016, to the Indenture, dated May 13, 2013, among ION Geophysical Corporation, the subsidiary guarantors named therein, Wilmington Savings Fund Society, FSB, as trustee, and U.S. Bank National Association, as collateral agent, filed on April 28, 2016 as Exhibit 4.3 to the Company’s Current Report on Form 8-K and incorporated by reference.
4.3		Indenture, dated as of April 28, 2016, among ION Geophysical Corporation, the subsidiary guarantors named therein, Wilmington Savings Fund Society, FSB, as trustee and collateral agent filed on April 28, 2016 as Exhibit 4.1 to the Company’s Current Report on Form 8-K and incorporated by reference.
4.4		Intercreditor Agreement, dated as of April 28, 2016, by and among PNC Bank, National Association, as first lien representative and first lien collateral agent for the first lien secured parties, and Wilmington Savings Fund Society, FSB, as second lien representative and second lien collateral agent for the second lien secured parties and as third lien representative for the third lien secured parties, and U.S. Bank National Association as third lien collateral agent for the third lien secured parties and acknowledged and agreed to by ION Geophysical Corporation and the other grantors named therein, filed on April 28, 2016 as Exhibit 10.1 to the Company’s Current Report on Form 8-K and incorporated by reference.
**10.1	—	Form of Employee Stock Option Award Agreement for ARAM Systems Employee Inducement Stock Option Program, filed on November 14, 2008 as Exhibit 4.4 to the Company’s Registration Statement on Form S-8 (Registration No. 333-155378) and incorporated herein by reference.
**10.2	—	Input/Output, Inc. 2003 Stock Option Plan, dated March 27, 2003, filed as Appendix B of the Company’s definitive proxy statement filed with the SEC on April 30, 2003, and incorporated herein by reference.
**10.3	—	Sixth Amended and Restated - 2004 Long-Term Incentive Plan, filed as Appendix A to the definitive proxy statement for the 2011 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 21, 2011, and incorporated herein by reference.
**10.4	—	Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — GX Technology Corporation Employment Inducement Stock Option Program, filed on April 4, 2005 as Exhibit 4.1 to the Company’s Registration Statement on Form S-8 (Reg. No. 333-123831), and incorporated herein by reference.
**10.5	—	ION Stock Appreciation Rights Plan dated November 17, 2008, filed as Exhibit 10.47 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2008, and incorporated herein by reference.

10.6	– Stock Purchase Agreement dated as of March 19, 2010, by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.

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10.7	Investor Rights Agreement dated as of March 25, 2010, by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.8	Share Purchase Agreement dated as of March 24, 2010, by and among ION Geophysical Corporation, INOVA Geophysical Equipment Limited and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.3 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.9	Joint Venture Agreement dated as of March 24, 2010, by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.4 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.10	Employment Agreement dated August 2, 2011, effective as of January 1, 2012, between ION Geophysical Corporation and R. Brian Hanson, filed on November 3, 2011 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2011, and incorporated herein by reference.
**10.11	First Amendment to Credit Agreement and Loan Documents dated May 29, 2012, filed on May 29, 2012 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.12	Consulting Services Agreement dated January 1, 2013, between ION Geophysical Corporation and ThePeebler Group LLC, filed on January 4, 2013 as Exhibit 10.1 to the Company's Current Report on Form8-K, and incorporated herein by reference.
**10.13	Second Amended and Restated 2013 Long-Term Incentive Plan, filed as Exhibit 10.39 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016, and incorporated herein by reference.
10.14	Revolving Credit and Security Agreement dated as of August 22, 2014 among PNC Bank, National Association, as agent for lenders, the lenders from time to time party thereto, as lenders, and PNC Capital Markets LLC, as lead arranger and bookrunner, with ION Geophysical Corporation, ION Exploration Products (U.S.A.), Inc., I/O Marine Systems, Inc. and GX Technology Corporation, as borrowers, filed on November 6, 2014 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2014, and incorporated herein by reference.
10.15	First Amendment to Revolving Credit and Security Agreement dated as of August 4, 2015 among PNC Bank, National Association, as lender and agent, the lenders from time to time party thereto, as lenders, with ION Geophysical Corporation, ION Exploration Products (U.S.A.), Inc., I/O Marine Systems, Inc. and GX Technology Corporation, as borrowers, filed on August 6, 2015 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.16	Second Amendment to the Revolving Credit and Security Agreement, dated as of April 28, 2016, among ION Geophysical Corporation and the subsidiary co-borrowers named therein, as borrowers, the financial institutions party thereto, as lenders, and PNC Bank, National Association, as agent for the lenders, filed on April 28, 2016 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated by reference.
**10.17	Employment Agreement dated effective as of November 13, 2014, between ION Geophysical Corporation and Steve Bate, filed as Exhibit 10.44 to the Company's Annual Report 10-K for the year ended December 31, 2014, and incorporated herein by reference.
**10.18	Form of Rights Agreement dated March 1, 2015 issued under the ION Stock Appreciation Rights Plan dated November 17, 2008, filed on May 7, 2015 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2015, and incorporated herein by reference.
**10.19	Form of Rights Agreement dated March 1, 2016 issued under the ION Stock Appreciation Rights Plan Dated November 17, 2008, and incorporated herein by reference.
**10.20	Equity Investment Agreement dated December 14, 2017, issued under the Second Amended and Restated 2013 Long-Term Incentive Plan dated December 31, 2016, and incorporated herein by reference.
**10.21	Employee Stock Purchase Plan dated May 26, 2010, and incorporated herein by reference.
21.1	Subsidiaries of the Company.

*23.1	Consent of Grant Thornton LLP.
*31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a).
*31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-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—31	The following materials are formatted in Extensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets at December 31, 2017 and 2016, (ii) Consolidated Statements of Operations for the years ended December 31, 2017, 2016 and 2015, (iii) Comprehensive Income (Loss) for the years ended December 31, 2017, 2016 and 2015, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015, (v) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2017, 2016 and 2015, (vi) Footnotes to Consolidated Financial Statements and (vii) Schedule II – Valuation and Qualifying Accounts.

* Filed herewith.
** Management contract or compensatory plan or arrangement.

(b) Exhibits required by Item 601 of Regulation S-K.
Reference is made to subparagraph (a) (3) of this Item 15, which is incorporated herein by reference.

(c) Not applicable.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Houston, State of Texas, on February 9, 2018.

ION GEOPHYSICAL CORPORATION

By /s/ R. Brian Hanson
R. Brian Hanson
President and Chief Executive Officer

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
ION Geophysical Corporation

Opinion on the financial statements
We have audited the accompanying consolidated balance sheets of ION Geophysical Corporation (a Delaware corporation) and subsidiaries (the “Company”) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive loss, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and schedule (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of December 31, 2017, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”), and our report dated February 8, 2018 expressed an unqualified opinion.
Basis for opinion
These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ GRANT THORNTON LLP

We have served as the Company’s auditor since 2014

Houston, Texas
February 8, 2018

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2017	December 31, 2016
	(In thousands, except share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$52,056	$52,652
Accounts receivable, net	19,478	20,770
Unbilled receivables	37,304	13,415
Inventories	14,508	15,241
Prepaid expenses and other current assets	7,643	9,559
Total current assets	130,989	111,637
Deferred income tax asset	1,753	—
Property, plant, equipment and seismic rental equipment, net	52,153	67,488
Multi-client data library, net	89,300	105,935
Goodwill	24,089	22,208
Intangible assets, net	1,666	3,103
Other assets	1,119	2,845
Total assets	$301,069	$313,216
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current maturities of long-term debt	$40,024	$14,581
Accounts payable	24,951	26,889
Accrued expenses	38,697	26,240
Accrued multi-client data library royalties	27,035	23,663
Deferred revenue	8,910	3,709
Total current liabilities	139,617	95,082
Long-term debt, net of current maturities	116,720	144,209
Other long-term liabilities	13,926	20,527
Total liabilities	270,263	259,818
Equity:		
Common stock, $0.01 par value; authorized 26,666,667 shares; outstanding 12,019,701 and 11,792,447 shares at December 31, 2017 and 2016, respectively.	120	118
Additional paid-in capital	903,247	899,198
Accumulated deficit	(854,921)	(824,679)
Accumulated other comprehensive loss	(18,879)	(21,748)
Total stockholders' equity	29,567	52,889
Noncontrolling interests	1,239	509
Total equity	30,806	53,398
Total liabilities and equity	$301,069	$313,216

See accompanying Footnotes to Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2017	2016	2015
	(In thousands, except per share data)		
Service revenues	$159,410	$130,640	$160,480
Product revenues	38,144	42,168	61,033
Total net revenues	197,554	172,808	221,513
Cost of services	103,124	115,763	180,215
Cost of products	18,791	21,013	33,295
Gross profit	75,639	36,032	8,003
Operating expenses:			
Research, development and engineering	16,431	17,833	26,445
Marketing and sales	20,778	17,371	30,493
General, administrative and other operating expenses	47,129	43,999	51,697
Total operating expenses	84,338	79,203	108,635
Loss from operations	(8,699)	(43,171)	(100,632)
Interest expense, net	(16,709)	(18,485)	(18,753)
Other income (expense)	(3,945)	1,350	98,275
Loss before income taxes	(29,353)	(60,306)	(21,110)
Income tax expense	24	4,421	4,044
Net loss	(29,377)	(64,727)	(25,154)
Net (income) loss attributable to noncontrolling interests	(865)	(421)	32
Net loss attributable to ION	$(30,242)	$(65,148)	$(25,122)
Net loss per share:			
Basic	$(2.55)	$(5.71)	$(2.29)
Diluted	$(2.55)	$(5.71)	$(2.29)
Weighted average number of common shares outstanding:			
Basic	11,876	11,400	10,957
Diluted	11,876	11,400	10,957

See accompanying Footnotes to Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Years Ended December 31,		
	2017	2016	2015
	(In thousands)		
Net loss	$(29,377)	$(64,727)	$(25,154)
Other comprehensive income (loss), net of taxes, as appropriate:			
Foreign currency translation adjustments	2,869	(6,967)	(1,974)
Total other comprehensive income (loss), net of taxes	2,869	(6,967)	(1,974)
Comprehensive net loss	(26,508)	(71,694)	(27,128)
Comprehensive (income) loss attributable to noncontrolling interests	(865)	(421)	32
Comprehensive net loss attributable to ION	$(27,373)	$(72,115)	$(27,096)

See accompanying Footnotes to Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2017	2016	2015
	(In thousands)		
Cash flows from operating activities:			
Net loss	$(29,377)	$(64,727)	$(25,154)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization (other than multi-client library)	16,592	21,975	26,527
Amortization of multi-client data library	47,102	33,335	35,784
Impairment of multi-client data library	2,304	—	399
Stock-based compensation expense	2,552	3,267	5,486
Accrual (reduction) of loss contingency related to legal proceedings	5,000	(1,168)	(101,978)
Loss on bond exchange	—	2,182	—
Write-down of excess and obsolete inventory	398	429	151
Deferred income taxes	(5,420)	(1,181)	7,444
Change in operating assets and liabilities:			
Accounts receivable	1,692	20,426	69,491
Unbilled receivables	(23,947)	6,543	1,630
Inventories	190	2,312	2,251
Accounts payable, accrued expenses and accrued royalties	1,443	(5,085)	(30,264)
Deferred revenue	5,131	(2,759)	(1,571)
Other assets and liabilities	4,370	(13,978)	(6,720)
Net cash provided by (used in) operating activities	28,030	1,571	(16,524)
Cash flows from investing activities:			
Investment in multi-client data library	(23,710)	(14,884)	(45,558)
Purchase of property, plant, equipment and seismic rental equipment	(1,063)	(1,488)	(19,241)
Proceeds from sale of cost method investments	—	2,698	—
Other investing activities	—	30	1,263
Net cash used in investing activities	(24,773)	(13,644)	(63,536)
Cash flows from financing activities:			
Borrowings under revolving line of credit	—	15,000	—
Repayments under revolving line of credit	—	(5,000)	—
Payments on notes payable and long-term debt	(4,816)	(8,634)	(7,452)
Cost associated with issuance of debt	(53)	(6,744)	(145)
Repurchase of common stock	—	(964)	(1,989)
Payments to repurchase bonds	—	(15,000)	—
Proceeds from employee stock purchases and exercise of stock options	1,619	—	—
Dividend payment to non-controlling interest	(100)	—	—
Other financing activities	(243)	(252)	73
Net cash used in financing activities	(3,593)	(21,594)	(9,513)
Effect of change in foreign currency exchange rates on cash and cash equivalents	(260)	1,386	898
Net decrease in cash and cash equivalents	(596)	(32,281)	(88,675)
Cash and cash equivalents at beginning of period	52,652	84,933	173,608
Cash and cash equivalents at end of period	$52,056	$52,652	$84,933

See accompanying Footnotes to Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands, except shares)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Treasury Stock	Noncontrolling Interests	Total Equity
Balance at January 1, 2015	10,965,606	$ 110	$ 889,284	$ (734,409)	$ (12,807)	$ (6,565)	$ 99	$ 135,712
Net (loss) income [(a)]	—	—	—	(25,122)	—	—	4	(25,118)
Translation adjustment	—	—	—	—	(1,974)	—	(22)	(1,996)
Stock-based compensation expense	—	—	5,486	—	—	—	—	5,486
Vesting of restricted stock units/awards	29,191	—	—	—	—	—	—	—
Purchase of treasury shares	(296,488)	(3)	—	—	—	(1,986)	—	(1,989)
Restricted stock cancelled for employee minimum income taxes	(6,208)	—	(126)	—	—	—	—	(126)
Issuance of stock for the ESPP	10,588	—	215	—	—	—	—	215
Purchase of subsidiary shares from noncontrolling interest	—	—	(144)	—	—	—	—	(144)
Balance at December 31, 2015 [(b)]	10,702,689	107	894,715	(759,531)	(14,781)	(8,551)	81	112,040
Net (loss) income [(a)]	—	—	—	(65,148)	—	—	421	(64,727)
Translation adjustment	—	—	—	—	(6,967)	—	7	(6,960)
Stock-based compensation expense	—	—	3,267	—	—	—	—	3,267
Vesting of restricted stock units/awards	40,495	—	—	—	—	—	—	—
Purchase of treasury shares	(155,304)	(1)	—	—	—	(963)	—	(964)
Restricted stock cancelled for employee minimum income taxes	(4,973)	—	(22)	—	—	—	—	(22)
Issuance of stock for the ESPP	4,100	—	23	—	—	—	—	23
Issuance of stock in bond exchange	1,205,440	12	1,215	—	—	9,514	—	10,741
Balance at December 31, 2016	11,792,447	118	899,198	(824,679)	(21,748)	—	509	53,398
Net (loss) income	—	—	—	(30,242)	—	—	865	(29,377)
Translation adjustment	—	—	—	—	2,869	—	(35)	2,834
Dividend payment to non-controlling interest	—	—	—	—	—	—	(100)	(100)
Stock-based compensation expense	—	—	2,552	—	—	—	—	2,552

Exercise of stock options	15,000	—	46	—	—	—	—	46
Vesting of restricted stock units/awards	115,576	1	(1)	—	—	—	—	—
Employee purchases of unregistered shares of common stock	120,567	1	1,572	—	—	—	—	1,573
Restricted stock cancelled for employee minimum income taxes	(23,889)	—	(120)	—	—	—	—	(120)
Balance at December 31, 2017	12,019,701	$ 120	$ 903,247	$ (854,921)	$ (18,879)	$ —	$ 1,239	$ 30,806

(a) Net income attributable to noncontrolling interests for 2015 excludes less than $(0.1) million related to the redeemable noncontrolling interests, which is reported in the mezzanine equity section of the Consolidated Balance Sheet.

(b) The figures for 2015, set forth in the tables above have been retroactively adjusted to reflect the one-for-fifteen reverse stock split completed on February 4, 2016.

See accompanying Footnotes to Consolidated Financial Statements.

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ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
FOOTNOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(1) Summary of Significant Accounting Policies
General Description and Principles of Consolidation
ION Geophysical Corporation and its subsidiaries offer a full suite of services and products for seismic data acquisition and processing. The consolidated financial statements include the accounts of ION Geophysical Corporation and its majority-owned subsidiaries (collectively referred to as the "Company" or "ION"). Intercompany balances and transactions have been eliminated. Certain reclassifications were made to previously reported amounts in the consolidated financial statements and notes thereto to make them consistent with the current presentation format.
Use of Estimates
The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates are made at discrete points in time based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of judgment and, therefore, cannot be determined with precision. Areas involving significant estimates include, but are not limited to, accounts and unbilled receivables, inventory valuation, sales forecasts related to multi-client data libraries, goodwill and intangible asset valuation and deferred taxes. Actual results could materially differ from those estimates.
Cash and Cash Equivalents
The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. The Company places its temporary cash investments with high credit quality financial institutions. At times such investments may be in excess of the Federal Deposit Insurance Corporation (FDIC) insurance limit. At December 31, 2017 and 2016, there was $0.4 million and $0.8 million, respectively, of long-term and short-term restricted cash used to secure standby and commercial letters of credit, which is included within Long-term and Other Current Assets.
Accounts and Unbilled Receivables
Accounts and unbilled receivables are recorded at cost, less the related allowance for doubtful accounts. The Company considers current information and events regarding the customers' ability to repay their obligations, such as the length of time the receivable balance is outstanding, the customers' credit worthiness and historical experience. Unbilled receivables relate to revenues recognized on multi-client surveys, imaging services and ocean bottom acquisition services on a proportionate basis, and on licensing of multi-client data libraries for which invoices have not yet been presented to the customer.
Inventories
Inventories are stated at the lower of cost (primarily first-in, first-out method) or market. The Company provides reserves for estimated obsolescence or excess inventory equal to the difference between cost of inventory and its estimated market value based upon assumptions about future demand for the Company's products, market conditions and the risk of obsolescence driven by new product introductions.
Property, Plant, Equipment and Seismic Rental Equipment
Property, plant, equipment and seismic rental equipment are stated at cost. Depreciation expense is provided straight-line over the following estimated useful lives:

	Years
Machinery and equipment	3-7
Buildings	5-25
Seismic rental equipment	3-5
Leased equipment and other	3-10

Expenditures for renewals and betterments are capitalized; repairs and maintenance are charged to expense as incurred. The cost and accumulated depreciation of assets sold or otherwise disposed of are removed from the accounts and any gain or loss is reflected in operating expenses.

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The Company evaluates the recoverability of long-lived assets, including property, plant, equipment and seismic rental equipment, when indicators of impairment exist, relying on a number of factors including operating results, business plans, economic projections and anticipated future cash flows. Impairment in the carrying value of an asset held for use is recognized whenever anticipated future cash flows (undiscounted) from an asset are estimated to be less than its carrying value. The amount of the impairment recognized is the difference between the carrying value of the asset and its fair value.

Multi-Client Data Library

The multi-client data library consists of seismic surveys that are offered for licensing to customers on a non-exclusive basis. The capitalized costs include costs paid to third parties for the acquisition of data and related activities associated with the data creation activity and direct internal processing costs, such as salaries, benefits, computer-related expenses and other costs incurred for seismic data project design and management. For 2017, 2016 and 2015, the Company capitalized, as part of its multi-client data library, $12.7 million, $6.6 million and $6.1 million, respectively, of direct internal processing costs. At December 31, 2017 and 2016, multi-client data library costs and accumulated amortization consisted of the following (in thousands):

	December 31,	
	2017	2016
Gross costs of multi-client data creation	$939,077	$906,306
Less accumulated amortization	(727,872)	(680,770)
Less impairments to multi-client data library	(121,905)	(119,601)
Total	$89,300	$105,935

The Company’s method of amortizing the costs of an in-process multi-client data library (the period during which the seismic data is being acquired and/or processed, referred to as the “New Venture” phase) consists of determining the percentage of actual revenue recognized to the total estimated revenues (which includes both revenues estimated to be realized during the New Venture phase and estimated revenues from the licensing of the resulting “on-the-shelf” data survey) and multiplying that percentage by the total cost of the project (the sales forecast method). The Company considers a multi-client data survey to be complete when all work on the creation of the seismic data is finished and that data survey is available for licensing. Once a multi-client data survey is complete, the data survey is considered “on-the-shelf” and the Company’s method of amortization is then the greater of (i) the sales forecast method or (ii) the straight-line basis over a four-year period. The greater amount of amortization resulting from the sales forecast method or the straight-line amortization policy is applied on a cumulative basis at the individual survey level. Under this policy, the Company first records amortization using the sales forecast method. The cumulative amortization recorded for each survey is then compared with the cumulative straight-line amortization. The four-year period utilized in this cumulative comparison commences when the data survey is determined to be complete. If the cumulative straight-line amortization is higher for any specific survey, additional amortization expense is recorded, resulting in accumulated amortization being equal to the cumulative straight-line amortization for such survey. The Company has determined the amortization period of four years based upon its historical experience that indicates that the majority of its revenues from multi-client surveys are derived during the acquisition and processing phases and during four years subsequent to survey completion.

The Company estimates the ultimate revenue expected to be derived from a particular seismic data survey over its estimated useful economic life to determine the costs to amortize, if greater than straight-line amortization. That estimate is made by the Company at the project’s initiation. For a completed multi-client survey, the Company reviews the estimate quarterly. If during any such review, the Company determines that the ultimate revenue for a survey is expected to be materially more or less than the original estimate of ultimate revenue for such survey, the Company decreases or increases (as the case may be) the amortization rate attributable to the future revenue from such survey. In addition, in connection with such reviews, the Company evaluates the recoverability of the multi-client data library, and, if required under Accounting Standards Codification (“ASC”) 360-10 “Impairment and Disposal of Long-Lived Assets,” records an impairment charge with respect to such data.

Equity Method Investment

In accordance with ASC 810 “Consolidation,” the Company determined that INOVA Geophysical is a variable interest entity because the Company’s voting rights with respect to INOVA Geophysical are not proportionate to its ownership interest and substantially all of INOVA Geophysical’s activities are conducted on behalf of the Company and BGP, a related party to the Company. The Company is not the primary beneficiary of INOVA Geophysical because it does not have the power to direct the activities of INOVA Geophysical that most significantly impact its economic performance. Accordingly, the Company does not consolidate INOVA Geophysical, but instead accounts for INOVA Geophysical using the equity method of accounting. Under this method, an investment is carried at the acquisition cost, plus the Company’s equity in undistributed earnings or losses since acquisition, less distributions received.

At December 31, 2014, the Company fully impaired its investment in INOVA reducing its equity investment in INOVA and its share of INOVA's accumulated other comprehensive loss, both to zero. As of December 31, 2017, the carrying value of this investment remains zero. The Company no longer records its equity in losses or earnings and has no obligation, implicit or explicit, to fund any expenses of INOVA Geophysical.

Noncontrolling Interests

The Company has non-redeemable noncontrolling interests. Non-redeemable noncontrolling interests in majority-owned affiliates are reported as a separate component of equity in "Noncontrolling interests" in the Consolidated Balance Sheets. Net loss in the Consolidated Statements of Operations is attributable to noncontrolling interests. The activity for this noncontrolling interest relates to proprietary processing projects in Brazil.

Goodwill and Other Intangible Assets

Goodwill is allocated to reporting units, which are either the operating segment or one reporting level below the operating segment. For purposes of performing the impairment test for goodwill as required by ASC 350 "Intangibles — Goodwill and Other," ("ASC 350") the Company established the following reporting units: E&P Technology & Services, Optimization Software & Services, Devices and Ocean Bottom Seismic Services.

In accordance with ASC 350, the Company is required to evaluate the carrying value of its goodwill at least annually for impairment, or more frequently if facts and circumstances indicate that it is more likely than not impairment has occurred. The Company formally evaluates the carrying value of its goodwill for impairment as of December 31 for each of its reporting units. The Company first performs a qualitative assessment by evaluating relevant events or circumstances to determine whether it is more likely than not that the fair value of a reporting unit exceeds its carrying amount. If the Company is unable to conclude qualitatively that it is more likely than not that a reporting unit's fair value exceeds its carrying value, then it will use a two-step quantitative assessment of the fair value of a reporting unit. To determine the fair value of these reporting units, the Company uses a discounted future returns valuation model, which includes a variety of level 3 inputs. The key inputs for the model include the operational three-year forecast for the Company and the then-current market discount factor. Additionally, the Company compares the sum of the estimated fair values of the individual reporting units less consolidated debt to the Company's overall market capitalization as reflected by the Company's stock price. If the carrying value of a reporting unit that includes goodwill is determined to be more than the fair value of the reporting unit, there exists the possibility of impairment of goodwill. An impairment loss of goodwill is measured in two steps by first allocating the fair value of the reporting unit to net assets and liabilities including recorded and unrecorded intangible assets to determine the implied carrying value of goodwill. The next step is to measure the difference between the carrying value of goodwill and the implied carrying value of goodwill, and, if the implied carrying value of goodwill is less than the carrying value of goodwill, an impairment loss is recorded equal to the difference. See further discussion below at Footnote 9 "Goodwill."

The intangible assets, other than goodwill, relate to customer relationships. The Company amortizes its customer relationship intangible assets on an accelerated basis over a 10- to 15-year period, using the undiscounted cash flows of the initial valuation models. The Company uses an accelerated basis as these intangible assets were initially valued using an income approach, with an attrition rate that resulted in a pattern of declining cash flows over a 10- to 15-year period.

Following the guidance of ASC 360 "Impairment and Disposal of Long-Lived Assets," the Company reviews the carrying values of these intangible assets for impairment if events or changes in the facts and circumstances indicate that their carrying value may not be recoverable. Any impairment determined is recorded in the current period and is measured by comparing the fair value of the related asset to its carrying value. See further discussion below at Footnote 8 "Details of Selected Balance Sheet Accounts — Intangible Assets."

Fair Value of Financial Instruments

The Company's financial instruments include cash and cash equivalents, short-term investments, accounts and unbilled receivables, accounts payable, accrued multi-client data library royalties and long-term debt. The carrying amounts of cash and cash equivalents, short-term investments, accounts and unbilled receivables, accounts payable and accrued multi-client data library royalties approximate fair value due to the highly liquid nature of these instruments. The fair value of the long-term debt is calculated using a market approach based upon Level 1 inputs, including an active market price.

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Revenue Recognition

The Company derives revenue from the sale of (i) multi-client and proprietary surveys, licenses of "on-the-shelf" data libraries and imaging services within its E&P Technology & Services segment; (ii) seismic data acquisition systems and other seismic equipment; (iii) seismic command and control software systems and software solutions for operations management within its E&P Operations Optimization segment; and (iv) fully-integrated Ocean Bottom Seismic Services ("OBS") solutions that include survey design and planning and data acquisition within its Ocean Bottom Seismic Services segment. All revenues of the E&P Technology & Services and Ocean Bottom Seismic Services segments and the services component of revenues for the Optimization Software & Services group within the E&P Operations Optimization segment are classified as services revenues. All other revenues are classified as product revenues.

Multi-Client and Proprietary Surveys, and Imaging Services — As multi-client surveys are being designed, acquired and/or processed, the New Venture phase, the Company enters into non-exclusive licensing arrangements with its customers. License revenues from these New Venture survey projects are recognized during the New Venture phase as the seismic data is acquired and/or processed on a proportionate basis as work is performed. Under this method, the Company recognizes revenues based upon quantifiable measures of progress, such as kilometers acquired or days processed. Upon completion of a multi-client seismic survey, the seismic survey is considered "on-the-shelf," and licenses to the survey data are granted to customers on a non-exclusive basis. Revenues on licenses of completed multi-client data surveys are recognized when (a) a signed final master geophysical data license agreement and accompanying supplemental license agreement are returned by the customer; (b) the purchase price for the license is fixed or determinable; (c) delivery or performance has occurred; (d) and no significant uncertainty exists as to the customer's obligation, willingness or ability to pay. In limited situations, the Company has provided the customer with a right to exchange seismic data for another specific seismic data set. In these limited situations, the Company recognizes revenue at the earlier of the customer exercising its exchange right or the expiration of the customer's exchange right.

The Company also performs seismic surveys under contracts to specific customers, whereby the seismic data is owned by those customers. Revenue is recognized as the seismic data is acquired and/or processed on a proportionate basis as work is performed. The Company uses quantifiable measures of progress consistent with its multi-client surveys.

Revenues from all imaging and other services are recognized when (a) persuasive evidence of an arrangement exists, (b) the price is fixed or determinable, and (c) collectability is reasonably assured. Revenues from contract services performed on a dayrate basis are recognized as the service is performed.

Acquisition Systems and Other Seismic Equipment — For the sales of acquisition systems and other seismic equipment, the Company follows the requirements of ASC 605-10 "Revenue Recognition" and recognizes revenue when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectability is reasonably assured; and (d) the acquisition system or other seismic equipment is delivered to the customer and risk of ownership has passed to the customer, or, in the case in which a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained.

Software — For the sales of navigation, survey and quality control software systems, the Company follows the requirements of ASC 985-605 "Software Revenue Recognition" ("ASC 985-605"). The Company recognizes revenue from sales of these software systems when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectability is reasonably assured; and (d) the software is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case in which a substantive customer-specified acceptance clause exists, the later of delivery or when the customer-specified acceptance is obtained. These arrangements generally include the Company providing related services, such as training courses, engineering services and annual software maintenance. The Company allocates revenue to each element of the arrangement based upon vendor-specific objective evidence ("VSOE") of fair value of the element or, if VSOE is not available for the delivered element, the residual method is used.

In addition to perpetual software licenses, the Company offers time-based software licenses. For time-based licenses, the Company recognizes revenue ratably over the contract term, which is generally two to five years.

Ocean Bottom Seismic Services — The Company recognizes revenues as they are realized and earned and can be reasonably measured, based on contractual day rates or on a fixed-price basis, and when collectability is reasonably assured. In connection with acquisition contracts, the Company may receive revenues for preparation and mobilization of equipment and personnel or for capital improvements to vessels. The Company defers the revenues earned and incremental costs incurred that are directly related to contract preparation and mobilization and recognizes such revenues and costs over the primary contract term of the acquisition project. The Company uses the ratio of square kilometers acquired as a percentage of the total square kilometers expected to be acquired over the primary term of the contract to recognize deferred revenues and amortize, in cost of services, the costs related to contract preparation and mobilization. The Company recognizes the costs of relocating vessels without contracts to more promising market sectors as such costs are incurred. Upon completion of acquisition contracts, the Company recognizes in earnings any demobilization fees received and expenses incurred.

Multiple-element Arrangements — When separate elements (such as an acquisition system, other seismic equipment and/or imaging and acquisition services) are contained in a single sales arrangement, or in related arrangements with the same customer, the Company follows the requirements of ASC 605-25 “Accounting for Multiple-Element Revenue Arrangement” (“ASC 605-25”).

This guidance requires that arrangement consideration be allocated at the inception of an arrangement to all deliverables using the relative selling price method. The Company allocates arrangement consideration to each deliverable qualifying as a separate unit of accounting in an arrangement based on its relative selling price. The Company determines its selling price using VSOE, if it exists, or otherwise third-party evidence (“TPE”). If neither VSOE nor TPE of selling price exists for a unit of accounting, the Company uses estimated selling price (“ESP”). The Company generally expects that it will not be able to establish TPE due to the nature of the markets in which the Company competes, and, as such, the Company typically will determine its selling price using VSOE or, if not available, ESP. VSOE is generally limited to the price charged when the same or similar product is sold on a standalone basis. If a product is seldom sold on a standalone basis, it is unlikely that the Company can determine VSOE for the product.

The objective of ESP is to determine the price at which the Company would transact if the product were sold by the Company on a standalone basis. The Company’s determination of ESP involves a weighting of several factors based on the specific facts and circumstances of the arrangement. Specifically, the Company considers the anticipated margin on the particular deliverable, the selling price and profit margin for similar products and the Company’s ongoing pricing strategy and policies.

Product Warranty — The Company generally warrants that its manufactured equipment will be free from defects in workmanship, materials and parts. Warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. The Company provides for estimated warranty as a charge to costs of sales at the time of sale. However, new information may become available, or circumstances (such as applicable laws and regulations) may change, thereby resulting in an increase or decrease in the amount required to be accrued for such matters (and therefore a decrease or increase in reported net income in the period of such change). In limited cases, the Company has provided indemnification of customers for potential intellectual property infringement claims relating to products sold.

Research, Development and Engineering

Research, development and engineering costs primarily relate to activities that are designed to improve the quality of the subsurface image and overall acquisition economics of the Company’s customers. The costs associated with these activities are expensed as incurred. These costs include prototype material and field testing expenses, along with the related salaries and stock-based compensation, facility costs, consulting fees, tools and equipment usage and other miscellaneous expenses associated with these activities.

Stock-Based Compensation

The Company accounts for stock-based compensation under the provisions of ASC 718, “Compensation – Stock Compensation” (“ASC 718”). The Company estimates the value of stock option awards on the date of grant using the Black-Scholes option pricing model. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model is affected by the Company’s stock price as well as assumptions regarding a number of subjective variables. These variables include, but are not limited to, expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate and expected dividends. The Company recognizes stock-based compensation on the straight-line basis over the service period of each award (generally the award’s vesting period).

Income Taxes

Income taxes are accounted for under the liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, including operating loss and tax credit carryforwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply in the years in which those temporary differences are expected to be recovered or settled. The Company records a valuation allowance when it is more likely than not that all or a portion of deferred tax assets will not be realized (see Footnote 5 “Income

Taxes”). The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

Debt Issuance Costs

In the first quarter of 2016, the Company adopted Accounting Standards Update (ASU) 2015-03, which requires entities to present debt issuance costs related to a debt liability as a direct deduction from the carrying amount of that debt liability on the balance sheet as opposed to being presented as a deferred charge, and ASU 2015-15, which adds paragraphs to ASU 2015-03 indicating that the SEC staff would not object to an entity deferring and presenting debt issuance costs related to line of credit arrangements as an asset and subsequently amortizing the deferred debt issuance costs ratably over the term of the line of credit arrangement, regardless of whether there are any outstanding borrowings on the line of credit arrangement.

For the years ended December 31, 2017 and 2016, unamortized debt issuance costs related to the Company's long-term debt are reported on the Consolidated Balance Sheets as a reduction of the carrying value of the related debt, except for the unamortized debt issuance costs related to the Company's Credit Facility which are reported in "Other Assets" on the Consolidated Balance Sheets ($0.2 million for 2017 and $1.2 million for 2016). Prior to adoption, the Company reported all unamortized debt issuance costs in "Other Assets" on the Consolidated Balance Sheets.

Comprehensive Net Loss

Comprehensive net loss as shown in the Consolidated Statements of Comprehensive Loss and the balance in Accumulated Other Comprehensive Loss as shown in the Consolidated Balance Sheets as of December 31, 2017 and 2016, consist of foreign currency translation adjustments.

Foreign Currency Gains and Losses

Assets and liabilities of the Company's subsidiaries operating outside the United States that have a functional currency other than the U.S. dollar have been translated to U.S. dollars using the exchange rate in effect at the balance sheet date. Results of foreign operations have been translated using the average exchange rate during the periods of operation. Resulting translation adjustments have been recorded as a component of Accumulated Other Comprehensive Loss. Foreign currency transaction gains and losses are included in the Consolidated Statements of Operations in Other income as they occur. Total foreign currency transaction losses were $1.6 million, $3.3 million and $2.1 million for 2017, 2016 and 2015, respectively.

Concentration of Foreign Sales Risk

The majority of the Company's foreign sales are denominated in U.S. dollars. For 2017, 2016 and 2015, international sales comprised 76%, 78% and 66%, respectively, of total net revenues. The significant decline in oil prices that began in the fourth quarter of 2014 have continued to impact the global market throughout 2015 and 2016. Since 2008, global economic problems and uncertainties have generally increased in scope and nature. To the extent that world events or economic conditions negatively affect the Company's future sales to customers in many regions of the world, as well as the collectability of the Company's existing receivables, the Company's future results of operations, liquidity and financial condition would be adversely affected.

(2) Segment and Geographic 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.

A summary of segment information follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Net revenues:			
E&P Technology & Services:			
New Venture	$100,824	$27,362	$48,294
Data Library	40,016	39,989	63,326
Total multi-client revenues	140,840	67,351	111,620
Imaging Services	16,409	25,538	45,630
Total	$157,249	$92,889	$157,250
E&P Operations Optimization:			
Devices	$23,610	$26,746	$36,269
Optimization Software & Services	16,695	16,756	27,994
Total	$40,305	$43,502	$64,263
Ocean Bottom Seismic Services	$—	$36,417	$—
Total	$197,554	$172,808	$221,513
Gross profit (loss):			
E&P Technology & Services	$65,196	$4,708	$13,508
E&P Operations Optimization	20,076	21,745	33,995
Ocean Bottom Seismic Services	(9,633)	9,579	(39,500)
Total	$75,639	$36,032	$8,003
Gross margin:			
E&P Technology & Services	41 %	5 %	9 %
E&P Operations Optimization	50 %	50 %	53 %
Ocean Bottom Seismic Services	— %	26 %	— %
Total	38 %	21 %	4 %
Loss from operations:			
E&P Technology & Services	$42,505	$(16,446)	$(24,941)
E&P Operations Optimization	8,022	9,652	20,131
Ocean Bottom Seismic Services	(16,259)	(1,756)	(55,080)
Support and other	(42,967)	(34,621)	(40,742)
Loss from operations	(8,699)	(43,171)	(100,632)
Interest expense, net	(16,709)	(18,485)	(18,753)
Other income (expense)	(3,945)	1,350	98,275
Loss before income taxes	$(29,353)	$(60,306)	$(21,110)

	Years Ended December 31,		
	2017	2016	2015
Depreciation and amortization (including multi-client data library):			
E&P Technology & Services	$53,663	$44,100	$51,014
E&P Operations Optimization	1,349	1,780	2,869
Ocean Bottom Seismic Services	7,001	7,511	6,158
Support and other	1,681	1,919	2,270
Total	$63,694	$55,310	$62,311

	December 31,	
	2017	2016
Total assets:		
E&P Technology & Services	$156,555	$159,965
E&P Operations Optimization	74,361	76,992
Ocean Bottom Seismic Services	20,828	29,908
Support and other	49,325	46,351
Total	$301,069	$313,216

A summary of total assets by geographic area follows (in thousands):

	December 31,	
	2017	2016
Total assets by geographic area:		
North America	$116,598	$145,013
Europe	51,876	61,329
Middle East	70,308	72,984
Latin America	55,661	23,891
Other	6,626	9,999
Total	$301,069	$313,216

A summary of fixed assets less accumulated depreciation by geographic area as follows (in thousands):

	December 31,	
	2017	2016
Total fixed assets less accumulated deprecation by geographic area:		
North America	$10,609	$17,637
Europe	20,725	27,714
Middle East	20,543	21,370
Latin America	170	202
Other	106	565
Total	$52,153	$67,488

Intersegment sales are insignificant for all periods presented. Support and other assets include all assets specifically related to support personnel and operation and a majority of cash and cash equivalents. Depreciation and amortization expense is allocated to segments based upon use of the underlying assets.

A summary of net revenues by geographic area follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Net revenues by geographic area:			
Latin America	$68,241	$24,090	$16,406
North America	48,120	38,005	74,634
Europe	44,930	41,674	72,577
Asia Pacific	18,896	16,226	19,135
Commonwealth of Independent States	8,222	1,929	11,008
Africa	6,837	41,417	13,182
Middle East	2,308	9,467	14,571
Total	$197,554	$172,808	$221,513

Net revenues are attributed to geographic areas on the basis of the ultimate destination of the equipment or service, if known, or the geographic area imaging services are provided. If the ultimate destination of such equipment is not known, net revenues are attributed to the geographic area of initial shipment.

(3) Long-term Debt and Lease Obligations

	December 31,	
Obligations (in thousands)	2017	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 credit facility (maturing August 22, 2019)	10,000	10,000
Equipment capital leases	279	3,446
Other debt	1,382	1,415
Costs associated with issuances of debt [1]	(3,983)	(5,137)
Total	156,744	158,790
Current portion of long-term debt and lease obligations	(40,024)	(14,581)
Non-current portion of long-term debt and lease obligations	$116,720	$144,209

(1) Represents debt issuance costs presented as a direct deduction from the carrying amount of the associated debt liability.

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 the Company, 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").

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;

- established a reserve that reduced 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 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 data library (not to exceed $15.0 million for the multi-client data library data component). As of December 31, 2017, the borrowing base under the Credit Facility was $25.5 million and there was $10.0 million of indebtedness resulting in $15.5 million of undrawn borrowing base availability under the Credit Facility. 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 ($15.5 million at December 31, 2017) plus the aggregate amount of unrestricted cash held by ION, the Subsidiary Borrowers and their domestic subsidiaries. At December 31, 2017, ION, the Subsidiary Borrowers and their domestic subsidiaries had unrestricted cash totaling $39.3 million and non-domestic subsidiaries had unrestricted cash totaling $12.7 million.

At December 31, 2017, the Company was in compliance with all of the covenants under the Credit Facility.

The Credit Facility, as amended, 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”). Prior to the completion of the Exchange Offer (as defined below) and Consent Solicitation (as defined below) on April 28, 2016, 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 December 31, 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, beginning June 15, 2016, 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, limit or prohibit 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 December 31, 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%

Equipment Capital Leases

The Company has entered into capital leases that are due in installments for the purpose of financing the purchase of computer equipment through 2019. Interest accrues under these leases at rates of up to 4.3% per annum, and the leases are collateralized by liens on the computer equipment. The assets are amortized over the lesser of their related lease terms or their estimated productive lives and such charges are reflected within depreciation expense.

A summary of future principal obligations under long-term debt and equipment capital lease obligations follows (in thousands):

Years Ended December 31,	Short-Term and Long-Term Debt	Capital Lease Obligations	Other Financing	Total
2018	$ 38,497	$ 250	$ 1,382	$40,129
2019	—	29	—	29
2020	—	—	—	—
2021	—	—	—	—
2022	120,569	—	—	120,569
Total	$ 159,066	$ 279	$ 1,382	$160,727

(4) Net Income (Loss) per Common 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 issuable under anti-dilutive options at December 31, 2017, 2016 and 2015 were 890,341, 847,635 and 560,797, respectively. All outstanding stock options for the twelve months ended December 31, 2017, 2016 and 2015 were anti-dilutive.

(5) Income Taxes

The sources of income (loss) before income taxes are as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Domestic	$(12,487)	$(41,246)	$21,065
Foreign	(16,866)	(19,060)	(42,175)
Total	$(29,353)	$(60,306)	$(21,110)

Components of income taxes are as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Current:			
Federal	$(166)	$—	$(4,715)
State and local	116	28	41
Foreign	5,494	5,574	1,274
Deferred:			
Federal	(1,263)	—	2,726
Foreign	(4,157)	(1,181)	4,718
Total income tax expense	$24	$4,421	$4,044

A reconciliation of the expected income tax expense on income (loss) before income taxes using the statutory federal income tax rate of 35% for 2017, 2016 and 2015 to income tax expense follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Expected income tax expense at 35%	$(10,274)	$(21,107)	$(7,389)
Foreign tax rate differential	(2,914)	5,932	1,769
Foreign tax differences	(5,610)	(4,828)	4,104
State and local taxes	116	28	41
Nondeductible expenses	4,308	(259)	578
Change in U.S. tax rate	77,410	—	—
Expired Capital Loss	1,114	1,321	15,950
Valuation allowance:			
Valuation allowance on expiring capital losses	(1,114)	(1,321)	(15,950)
Valuation allowance on operations	(63,012)	24,655	4,941
Total income tax expense	$24	$4,421	$4,044

As a result of passage of the Tax Cut and Jobs Act (the "Act") on December 22, 2017, the Company's U.S. deferred tax assets, liabilities, and associated valuation allowance as of December 31, 2017 have been re-measured at the new U.S. federal tax rate of 21%. The tax effects of the cumulative temporary differences resulting in the net deferred income tax asset (liability) are as follows (in thousands):

	December 31,	
	2017	2016
Non-current deferred:		
Deferred income tax assets:		
Accrued expenses	$1,976	$2,994
Allowance Accounts	2,960	4,861
Net operating loss carryforward	87,705	98,896
Capital loss carryforward	—	1,114
Equity method investment	35,292	58,820
Original issue discount	9,624	17,924
Basis in identified intangibles	9,408	15,286
Tax credit carryforwards	6,929	7,051
Contingency accrual	788	—
Other	4,035	10,755
Total non-current deferred income tax asset	158,717	217,701
Valuation allowance	(153,463)	(217,589)
Net non-current deferred income tax asset	5,254	112
Deferred income tax liabilities:		
Other	—	(1,240)
Unbilled receivables	(3,501)	(1,908)
Basis in property, plant and equipment	—	(531)
Total net non-current deferred income tax asset (liability)	$1,753	$(3,567)

During 2013, the Company established a valuation allowance on the substantial majority of U.S. net deferred tax assets due to the significant charges taken during the year and the related inability to rely on projections of future income. As of December 31, 2017, the Company has a valuation allowance on substantially all net U.S. deferred tax assets. The valuation allowance was released in 2017 with respect to refundable U.S. alternative minimum tax ("AMT") credits that will be realized as a result of provisions in the Act. The valuation allowance was calculated in accordance with the provisions of ASC 740-10, "Accounting for 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. The Company will continue to record a valuation allowance for the substantial majority of its deferred tax assets until there is sufficient evidence to warrant reversal.

At December 31, 2017, the Company had U.S. net operating loss carryforwards of approximately $238.0 million, expiring in 2034, and net operating loss carryforwards outside of the U.S. of approximately $134.7 million, the majority of which expire beyond 2025.

As of December 31, 2017, the Company has approximately $0.4 million of unrecognized tax benefits and does not expect to recognize any significant increases in unrecognized tax benefits during the next twelve-month period. Interest and penalties, if any, related to unrecognized tax benefits are recorded in income tax expense. During 2017, 2016 and 2015, the aggregate changes in the Company's total gross amount of unrecognized tax benefits are summarized as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Beginning balance	$1,299	$1,250	$1,957
Increases in unrecognized tax benefits – current year positions	59	49	75
Decreases in unrecognized tax benefits – prior year position	(911)	—	(782)
Ending balance	$447	$1,299	$1,250

The Company's U.S. federal tax returns for 2014 and subsequent years remain subject to examination by tax authorities. In the Company's foreign tax jurisdictions, tax returns for 2013 and subsequent years generally remain open to examination.

As of December 31, 2017, the Company considered the outside book-over-tax basis difference in its foreign subsidiaries to be in the amount of approximately $92.2 million. United States income taxes have not been provided on this basis difference as it is the Company's intention to reinvest the undistributed earnings of its foreign subsidiaries to the extent they cannot be remitted to the United States without incurring incremental tax as provided in the Act. Additionally, the Company had no impact in the U.S. with respect to the one-time deemed repatriation of net foreign subsidiary earnings under the Act, as a result of the allocation of foreign subsidiary deficits against positive earnings.

(6) Legal Matters

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, denying the Company's post-verdict motions that challenged the jury's infringement findings and the damages amount. In the Memorandum and Order, the judge also stated that WesternGeco was entitled to be awarded supplemental damages for the additional DigiFIN units that were supplied from the United States before and after 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 were subject to supplemental damages and also ruling that the supplemental damages applicable to the additional units were to 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 reducing 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 awarded 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. 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. (the “Court of Appeals”). On July 2, 2015, the Court of Appeals reversed in part the Final Judgment of the District Court, holding the District Court erred by including lost profits in the Final Judgment. Lost profits were $93.4 million and prejudgment interest on the lost profits 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.

As previously disclosed, we had previously taken a loss contingency accrual of $123.8 million. As a result of the reversal by the Court of Appeals, as of June 30, 2015, we reduced our loss contingency accrual to $22.0 million.

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 vacated the Court of Appeals’ ruling although it did not address the lost profits question at that time. Rather, 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 Court of Appeals for a determination of whether or not the willfulness determination by the District Court was appropriate.

On October 14, 2016, the Court of Appeals issued a mandate returning the case to the District Court for consideration of whether or not additional damages for willfulness we appropriate. 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 ruling at the hearing, 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 and ruling 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 Company and WesternGeco each met with the Solicitor General’s office in late July, 2017. On December 6, 2017, the Solicitor General filed its brief, and took the position that the Supreme Court ought to grant certiorari. On January 12, 2018, the Supreme Court granted certiorari as to whether the Court of Appeals erred in holding that lost profits arising from use of prohibited combinations occurring outside of the United States are categorically unavailable in cases where patent infringement is proven under 35 U.S.C. § 271(f)(2) (the specific statute under which the Company was ultimately held to have infringed WesternGeco’s patents and which the District Court and the Federal Circuit relied in entering their final rulings). The Company will argue to the Supreme Court that the decision of the Court of Appeals that eliminated lost profits ought to be upheld. We anticipate oral arguments will take place in April of 2018 and that the Supreme Court will issue a decision by the end of June of 2018.

At the Court of Appeals the Company presented multiple arguments as to why the District Court’s award of lost profits was improper. The lost profits damages awarded by the District Court were based on the use of the Company’s products by our customers outside of the United States. The Company argued at the Court of Appeals that, as a matter of law, WesternGeco cannot recoup lost profits for the overseas use of our products. The Company also argued that, under the jury instructions given in our case, WesternGeco would need to have been a direct competitor of the

Company's in the survey markets to recoup lost profits, and that the jury was required to find that WesternGeco and ION were direct competitors. Because the Court of Appeals ruled in our favor on the first argument, and overturned the award of lost profits on that basis, the Court of Appeals did not rule on our "direct competitor" argument. If the Supreme Court overturns the Court of Appeals' decision that lost profits cannot be awarded to WesternGeco because the subsequent use of the apparatus was overseas, the case will be remanded back to the Court of Appeals, at which time the Company will present our second argument (that lost profits should not be awarded to WesternGeco because they were not our direct competitor).

Other proceedings may have an impact on WesternGeco's ability to recover lost profits damages even if WesternGeco prevails in the Supreme Court, and even if the Company does not prevail on the "direct competitor" argument in the Court of Appeals. The Company was a party to a challenge to the validity of several of WesternGeco's patent claims by means of an Inter Partes Review ("IPR") with the Patent Trial and Appeal Board ("PTAB"). While the above-described lawsuit was pending on appeal, the PTAB invalidated four of the six patent claims that formed the basis for the jury verdict in the lawsuit.

WesternGeco appealed that decision to the Court of Appeals, which heard our and WesternGeco's arguments on January 23, 2018. If the Court of Appeals affirms the PTAB's invalidation of the patents, that may provide a separate ground for reducing or vacating any lost-profits award in the lawsuit. We expect the Court of Appeals to rule on the PTAB issue late in first quarter of 2018 or in the second quarter of 2018.

The Company may not ultimately prevail in any of the appeals processes noted above and we could be required to pay some or all of the lost profits that were awarded by the District Court. Our assessment that we do not have a loss contingency may change in the future due to developments at the Supreme Court, Court of Appeals, or District Court, and other events, such as changes in applicable law, and such reassessment could lead to the determination that a loss contingency is probable, which could have a material effect on our business, financial condition and results of operations. The Company's assessments disclosed in this Annual Report on Form 10-K or elsewhere are based on currently available information and involve elements of judgment and significant uncertainties. Actual losses may equal or be considerably less than the lost profits awarded by the District Court. The Company does not anticipate that any losses from the date hereof would exceed the lost profits awarded by the District Court (except for the potential imposition of pre and post-judgment interest).

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

A summary of other income follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Reduction of (accrual for) loss contingency related to legal proceedings (Footnote 6)	$(5,000)	$1,168	$101,978
Recovery of INOVA bad debts	844	3,983	—
Loss on bond exchange	—	(2,182)	—
Other income	211	(1,619)	(3,703)
Total other income (loss)	$(3,945)	$1,350	$98,275

(8) Details of Selected Balance Sheet Accounts

Accounts Receivable

A summary of accounts receivable follows (in thousands):	December 31,	
	2017	2016
Accounts receivable, principally trade	$20,050	$22,214
Less allowance for doubtful accounts	(572)	(1,444)
Accounts receivable, net	$19,478	$20,770

Inventories

A summary of inventories follows (in thousands):	December 31,	
	2017	2016
Raw materials and purchased subassemblies	$20,448	$21,454
Work-in-process	1,146	2,255
Finished goods	7,953	6,581
Reserve for excess and obsolete inventories	(15,039)	(15,049)
Total	$14,508	$15,241

Property, Plant, Equipment and Seismic Rental Equipment

A summary of property, plant, equipment and seismic rental equipment follows (in thousands):

	December 31,	
	2017	2016
Buildings	$15,822	$17,424
Machinery and equipment	145,654	157,618
Seismic rental equipment	1,677	1,557
Furniture and fixtures	3,869	3,905
Other	28,965	30,049
Total	195,987	210,553
Less accumulated depreciation	(143,834)	(143,065)
Property, plant, equipment and seismic rental equipment, net	$52,153	$67,488

Total depreciation expense, including amortization of assets recorded under capital leases, for 2017, 2016 and 2015 was $15.2 million, $20.3 million and $24.6 million, respectively.

Intangible Assets

A summary of intangible assets, net, follows (in thousands):	December 31, 2017		
	Gross Amount	Accumulated Amortization	Net
Customer relationships	$34,400	$ (32,734)	$1,666
Total	$34,400	$ (32,734)	$1,666

	December 31, 2016		
	Gross Amount	Accumulated Amortization	Net
Customer relationships	$36,934	$ (33,831)	$3,103
Total	$36,934	$ (33,831)	$3,103

Total amortization expense for intangible assets for 2017, 2016 and 2015 was $1.4 million, $1.7 million and $1.9 million, respectively. A summary of the estimated amortization expense for the next three years follows (in thousands):

Years Ended December 31,	
2018	$1,169
2019	$497

Accrued Expenses

A summary of accrued expenses follows (in thousands):

	December 31,	
	2017	2016
Compensation, including compensation-related taxes and commissions	$19,809	$14,935
Accrued multi-client data library acquisition costs	5,104	567
Income tax payable	1,868	1,306
Accrual for legal proceedings (Footnote 6)	3,750	—
Other	8,166	9,432
Total	$38,697	$26,240

Other Long-term Liabilities

A summary of other long-term liabilities follows (in thousands):

	December 31,	
	2017	2016
Deferred lease liabilities	12,811	13,955
Facility restructuring accrual	—	1,765
Deferred income tax liability	—	3,679
Other	1,115	1,128
Total	$13,926	$20,527

(9) Goodwill

On December 31, 2017, the Company completed the annual reviews of the carrying value of goodwill in its E&P Technology & Services and Optimization Software & Services reporting units and noted no impairments. The qualitative assessment concluded it was more likely than not that the fair values of the Company’s E&P Technology & Services, and Optimization Software & Services reporting units exceeded their carrying values.

The following is a summary of the changes in the carrying amount of goodwill for the years ended December 31, 2017 and 2016 (in thousands):

	E&P Technology & Services	Optimization Software & Services	Total
Balance at January 1, 2016	$ 2,943	$ 23,331	$26,274
Impact of foreign currency translation adjustments	—	(4,066)	(4,066)
Balance at December 31, 2016	2,943	19,265	22,208
Impact of foreign currency translation adjustments	—	1,881	1,881
Balance at December 31, 2017	$ 2,943	$ 21,146	$24,089

(10) Stockholders' Equity and Stock-based Compensation

Stock Option Plans

The Company has adopted stock option plans for eligible employees, directors and consultants, which provide for the granting of options to purchase shares of common stock. The options under these plans generally vest in equal annual installments over a four-year period and have a term of ten years. These options are typically granted with an exercise price per share equal to or greater than the current market price and, upon exercise, are issued from the Company’s unissued common shares. In August 2006, the Compensation Committee (“Committee”) of the Board of Directors (“Board”) of the Company approved fixed pre-established quarterly grant dates for all future grants of options.

At-The-Market Equity Offering Program

On December 22, 2016 the Company announced that it had filed a prospectus supplement under which it may sell up to $20.0 million of its common stock through an "at-the-market" equity offering program (the "ATM Program"). The Company intended to use the net proceeds from sales under the ATM Program for general corporate purposes. The timing of any sales depended on a variety of factors to be determined by the Company. Effective May 2, 2017, the Company terminated and canceled the ATM Program. No shares were sold pursuant to the ATM Program and the Company has no further obligations thereunder.

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 was 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 was determined by management at its discretion and depended 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 the Company's outstanding indebtedness. The repurchase program did not obligate the Company to acquire any particular amount of common stock and could be modified or suspended at any time and could be terminated prior to completion. As of December 31, 2016, the Company was authorized to repurchase up to $25 million through November 10, 2017 and had repurchased $3 million or 451,792 shares of its common stock under the repurchase program at an average price per share of $6.41. The program expired November 10, 2017.

Transactions under the stock option plans are summarized as follows:

	Option Price per Share	Outstanding	Vested	Available for Grant
January 1, 2015	$37.05-245.85	599,069	358,390	183,468
Granted	34.20	53,328	—	(53,328)
Vested	—	—	79,779	—
Cancelled/forfeited	37.05-231.45	(91,600)	(53,864)	12,358
Restricted stock granted out of option plans	—	—	—	(45,652)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans	—	—	—	157
December 31, 2015	34.20-245.85	560,797	384,305	97,003
Increase in shares authorized	—	—	—	1,150,940
Granted	3.10	415,000	—	(415,000)
Vested	—	—	67,480	—
Cancelled/forfeited	3.10-245.85	(128,162)	(103,432)	18,895
Restricted stock granted out of option plans	—	—	—	(259,300)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans	—	—	—	7,182
December 31, 2016	3.10-245.85	847,635	348,353	599,720
Granted	13.15	156,000	—	(156,000)
Vested	—	—	149,537	—
Exercised	3.10	(15,000)	(15,000)	—
Cancelled/forfeited	3.10-245.85	(98,294)	(47,612)	82,118
Restricted stock granted out of option plans	—	—	—	(59,500)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans	—	—	—	22,065
December 31, 2017	$3.10-$245.85	890,341	435,278	488,403

Stock options outstanding at December 31, 2017 are summarized as follows:

Option Price per Share	Outstanding	Weighted Average Exercise Price of Outstanding Options	Weighted Average Remaining Contract Life	Vested	Weighted Average Exercise Price of Vested Options
$3.10 - $57.90	641,030	$ 15.17	7.1 years	202,312	$ 29.89
$61.05 - $71.85	76,963	$ 62.14	5.8 years	60,618	$ 62.43
$81.60 - $99.60	115,742	$ 88.79	4.4 years	115,742	$ 88.79
$106.05 - $245.85	56,606	$ 131.16	2.7 years	56,606	$ 131.16
Totals	890,341	$ 36.17	6.4 years	435,278	$ 63.25

Additional information related to the Company's stock options follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (000's)
Total outstanding at January 1, 2017	847,635	$ 46.21		6.1 years	$ 1,175
Options granted	156,000	$ 13.15	$ 8.10		
Options exercised	(15,000)	$ 3.10			
Options cancelled	(50,682)	$ 7.32			
Options forfeited	(47,612)	$ 180.52			
Total outstanding at December 31, 2017	890,341	$ 36.17		6.4 years	$ 6,774
Options exercisable and vested at December 31, 2017	435,278	$ 63.25		5.4 years	$ 1,436

The total intrinsic value of options exercised during 2017, 2016 and 2015 was less than $0.1 million, $0.1 million and $0.1 million, respectively. Cash received from option exercises under all share-based payment arrangements for 2017 was less than $0.1 million and during 2016 and 2015 there was no cash received. The weighted average grant date fair value for stock option awards granted during 2017, 2016 and 2015 was $8.10, $2.04 and $16.65 per share, respectively.

Restricted Stock and Restricted Stock Unit Plans

The Company has issued restricted stock and restricted stock units under the Company's 2013 Long-Term Incentive Plan and other applicable plans. Restricted stock units are awards that obligate the Company to issue a specific number of shares of common stock in the future if continued service vesting requirements are met. Non-forfeitable ownership of the common stock will vest over a period as determined by the Company in its sole discretion, generally in equal annual installments over a three-year period. Shares of restricted stock awarded may not be sold, assigned, transferred, pledged or otherwise encumbered by the grantee during the vesting period.

The status of the Company's restricted stock and restricted stock unit awards for 2017 follows:

	Number of Shares/Units
Total nonvested at January 1, 2017	285,308
Granted	59,500
Vested	(115,577)
Forfeited	(27,529)
Total nonvested at December 31, 2017	201,702

At December 31, 2017, the intrinsic value of restricted stock and restricted stock unit awards was approximately $4.0 million. The weighted average grant date fair value for restricted stock and restricted stock unit awards granted during 2017, 2016 and 2015 was $11.36, $3.81 and $34.20 per share, respectively. The total fair value of shares vested during 2017, 2016 and 2015 was $0.6 million, $0.2 million and $0.6 million, respectively.

Employee Stock Purchase Plan

Effective February, 2016, the Company suspended its Employee Stock Purchase Plan ("ESPP") that had been in place since June 2010. The ESPP allowed all eligible employees to authorize payroll deductions at a rate of 1% to 10% of base compensation (or a fixed amount per pay period) for the purchase of the Company's common stock. Each participant was limited to purchase no more than 33 shares per offering period or 66 shares annually. Additionally, no participant could purchase shares in any calendar year that exceeded $10,000 in fair market value based on the fair market value of the stock on the offering commencement date. The purchase price of the common stock was the lesser of 85% of the closing price on the first day of the applicable offering period (or most recently preceding trading day) or 85% of the closing price on the last day of the offering period (or most recently preceding trading day). Each offering period was six months and commenced on February 1 and August 1 of each year. The ESPP was considered a compensatory plan under ASC 718, and the Company recorded compensation expense of approximately $0.1 million and $0.2 million during 2016 and 2015, respectively. The expense represents the estimated fair value of the look-back purchase option. The fair value was determined using the Black-Scholes option pricing model and was recognized over the purchase period.

Stock Appreciation Rights Plan

The Company has adopted a stock appreciation rights plan which provides for the award of stock appreciation rights ("SARs") to directors and selected key employees and consultants. The awards under this plan are subject to the terms and conditions set forth in agreements between the Company and the holders. The exercise price per SAR is not to be less than one hundred percent of the fair market value of a share of common stock on the date of grant of the SAR. The term of each SAR shall not exceed ten years from the grant date. Upon exercise of a SAR, the holder shall receive a cash payment in an amount equal to the spread specified in the SAR agreement for which the SAR is being exercised. In no event will any shares of common stock be issued, transferred or otherwise distributed under the plan.

On March 1, 2016, the Company issued 1,210,000 Stock Appreciation Rights ("SARs") awards to 15 selected key employees with an exercise price of $3.10. None of these SARs were awarded to non-employee directors. The vesting of these SARs is achieved through both a market condition and a service condition. The market condition is achieved, in part or in full, in the event that during the four-year period beginning on the date of grant the 20-day trailing volume-weighted average price of a share of common stock is (i) greater than 120% of the exercise price for the first 1/3 of the awards, (ii) greater than 125% of the exercise price for the second 1/3 of the awards and (iii) greater than 130% of the exercise price for the final 1/3 of the awards. The exercise condition restricts the ability of the holders to exercise awards until certain service milestones have been reached such that (i) no more than 1/3 of the awards may be exercised, if vested, on and after the first anniversary of the date of grant, (ii) no more than 2/3 of the awards may be exercised, if vested, on and after the second anniversary of the date of grant and (iii) all of the awards may be exercised, if vested, on and after the third anniversary of the date of grant.

On December 13, 2017, the Compensation Committee (the "Committee") of the Board of Directors (the "Board") of the Company authorized and approved the acceleration of the vesting date to December 13, 2017 for the second tranche of the Company's outstanding SARs, which were issued on March 1, 2016. The second tranche of the SARs awards was originally scheduled to vest on March 1, 2018. The vesting of the second tranche of the SARs awards was accelerated to facilitate the exercise by the SARs participants, if they so choose, of a larger portion of the SARs awards prior to year-end, as such an exercise would minimize the potential cash flow impact of any such exercise in the first quarter of 2018, would mitigate the ongoing mark to market accounting requirements for cash-settled SARs, and would afford the SARs participants liquidity to invest in common stock of the Company to further align their interests with those of the Company's stockholders. Participants exercised 663,330 SARs awards at a $9.95 gain per share.

Pursuant to ASC 718, the SARs are considered liability awards and as such, these amounts are accrued in the liability section of the balance sheet. The Company calculated the fair value of each SAR award as of December 31, 2017 using a Monte Carlo simulation model. The following assumptions were used:

	December 31, 2017
Risk-free interest rates	2.36%
Expected lives (in years)	1.25
Expected dividend yield	—%

Expected volatility	77.8%

On March 1, 2015, the Company issued 207,207 SAR awards to 16 selected key employees with an exercise price of $34.20. None of these SARs were awarded to non-employee directors. The SAR awards number and exercise price have been retroactively adjusted to reflect the one-for-fifteen reverse stock split completed on February 4, 2016. The vesting of these SARs is achieved through both a market condition and a service condition. The market condition is achieved, in part or in full, in the event that during the four-year period beginning on the date of grant the 20-day trailing volume-weighted average price of a share of common stock is (i) greater than 120% of the exercise price for the first 1/3 of the awards, (ii) greater than 125% of the exercise price for the second 1/3 of the awards and (iii) greater than 130% of the exercise price for the final 1/3 of the awards. The exercise condition restricts the ability of the holders to exercise awards until certain service milestones have been reached such that (i) no more than 1/3 of the awards may be exercised, if vested, on and after the first anniversary of the date of grant, (ii) no more than 2/3 of the awards may be exercised, if vested, on and after the second anniversary of the date of grant and (iii) all of the awards may be exercised, if vested, on and after the third anniversary of the date of grant.

Pursuant to ASC 718, “Compensation – Stock Compensation,” the SARs are considered liability awards and as such, these amounts are accrued in the liability section of the balance sheet. The Company calculated the fair value of each SAR award on the date of grant using a Monte Carlo simulation model. The following assumptions were used:

	December 31, 2015
Risk-free interest rates	2.19%
Expected lives (in years)	3.3
Expected dividend yield	—%
Expected volatility	69.38%

Additionally, as of December 31, 2017, the Company had 9,333 SAR awards outstanding to one individual with an exercise price of $45.00.

The Company recorded $6.6 million of share-based compensation expense during 2017, $0.5 million during 2016 and less than $0.1 million in 2015, related to employee SARs.

Additional information related to the Company's SARs follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (000’s)
Total outstanding at January 1, 2015	9,333	$ 45.00		2.9 years	$ —
SARs granted	207,199	$ 34.20	$ 9.94		
Total outstanding at December 31, 2015	216,532	$ 34.67			
SARs granted	1,210,000	$ 3.10	$ 17.55		
SARs cancelled	(10,399)	$ 34.20			
Total outstanding at December 31, 2016	1,416,133	$ 7.70			
SARs exercised	(713,330)	$ 3.10			
SARs cancelled	(136,939)	$ 7.70			
Total outstanding at December 31, 2017	565,864	$ 13.49		7.2 years	$ 6,327
SARs exercisable and vested at December 31, 2017	44,332	$ 11.92		7.2 years	$ 583

Valuation Assumptions

The Company calculated the fair value of each stock option on the date of grant using the Black-Scholes option pricing model. The following assumptions were used for each respective period:

	Years Ended December 31,		
	2017	2016	2015
Risk-free interest rates	2.14%	1.3%	1.38%
Expected lives (in years)	5.0	5.5	4.5
Expected dividend yield	—%	—%	—%
Expected volatility	74.41%	78.76%	59.32%

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The computation of expected volatility during 2017, 2016 and 2015 was based on an equally weighted combination of historical volatility and market-based implied volatility. Historical volatility was calculated from historical data for a period of time approximately equal to the expected term of the option award, starting from the date of grant. Market-based implied volatility was derived from traded options on the Company's common stock having a term of six months. The Company's computation of expected life in 2017, 2016 and 2015 was determined based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. The risk-free interest rate assumption is based upon the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option.

Stock-based Compensation Expense

The following tables summarizes stock-based compensation expense for the years ended December 31, 2017, 2016 and 2015 as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Stock-based compensation expense	$2,552	$3,267	$5,486
Tax benefit related thereto	(862)	(1,168)	(1,826)
Stock-based compensation expense, net of tax	$1,690	$2,099	$3,660

	Years Ended December 31,		
	2017	2016	2015
Stock appreciation rights expense	$6,611	$547	$(54)
Tax benefit related thereto	(2,314)	(191)	19
Stock appreciation rights expense, net of tax	$4,297	$356	$(35)

Equity Investment Program

To encourage the Company's executive officers and other key employees to purchase common stock of the Company and further align their interests with those of the Company's stockholders, the Board authorized and approved an equity investment program (the "Program") pursuant to which certain of the executive officers and other key employees of the Company are permitted, but not obligated, to purchase unregistered shares of common stock of the Company directly from the Company at market prices. In connection with any such purchases, the Committee authorized and approved, on December 13, 2017, a grant by the Company to such purchasing executive officers and key employees of a certain number of shares of restricted stock. On December 13, 2017, the Committee also authorized and approved to grant to certain executive officers and key employees a certain number of shares of restricted stock in connection with certain purchases of shares of the Company's common stock in the open market.

Specifically, for each five (5) shares directly purchased from the Company or in the open market during a defined period (to expire no later than December 31, 2017), the Company will issue one (1) share of restricted stock, subject to certain limitations as to the total number of restricted shares to be issued by the Company. Provided that an executive officer or key employee remains employed with the Company until March 1, 2018, the restricted stock will be granted as of March 1, 2018, will vest in full on the date that is 90 days after the grant date and will be subject to the other terms and conditions of the Company's form of restricted stock agreement and the Company's 2013 Long-Term Incentive Plan. The Company sold, in a private placement under Section 4(a)(2) of the Securities Act of 1933, as amended on December 14, 2017, 120,567 shares of Company common stock at $13.05 per share (the closing price of the Company's common stock on the NYSE on such date) and executive officers and other key employees purchased 219,346 shares in the open market.

(11) Supplemental Cash Flow Information and Non-Cash Activity

Supplemental disclosure of cash flow information follows (in thousands):

	Years Ended December 31,				
	2017	2016		2015	
Cash paid during the period for:					
Interest	$ 14,181	$ 15,691		$ 15,441	
Income taxes	7,030	4,474		8,163	
Non-cash items from investing and financing activities:					
Purchase of computer equipment financed through capital leases	—	—		1,178	
Leasehold improvement paid by landlord	—	955		—	
Issuance of stock in bond exchange	—	10,741		—	
Transfer of inventory to property, plant and equipment	—	17,662	(a)	15,936	(b)
Investment in multi-client data library financed through trade payables	9,059	—		8,939	

(a) This transfer of $17.7 million of inventory to property, plant, equipment and seismic rental equipment in December 2016, relates to ocean bottom seismic equipment manufactured by the Company to be deployed in the acquisition of ocean bottom seismic data.

(b) This transfer of inventory to property, plant, equipment and seismic rental equipment relates to ocean bottom seismic equipment manufactured by the Company to be deployed in the acquisition of ocean bottom seismic data. During the twelve months ended December 31, 2015, the Company purchased approximately $19.2 million of property, plant, equipment and seismic rental equipment, including approximately $15.3 million related to the manufacture of ocean bottom seismic equipment that will be used by the Ocean Bottom Seismic Services segment.

(12) Operating Leases

Lessee. The Company leases certain equipment, offices and warehouse space under non-cancelable operating leases. Rental expense was $11.4 million, $11.3 million and $11.8 million for 2017, 2016 and 2015, respectively.

A summary of future rental commitments over the next five years under non-cancelable operating leases follows (in thousands):

Years Ending December 31,	
2018	$10,334
2019	9,812
2020	9,480
2021	9,435

2022	9,251
Total	$48,312

(13) 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.

Due to their highly liquid nature, the amount of the Company’s other financial instruments, including cash and cash equivalents, accounts and unbilled receivables, short term investments, accounts payable and accrued multi-client data library royalties, represent their approximate fair value.

The carrying amounts of the Company’s long-term debt as of December 31, 2017 and 2016 were $160.7 million and $163.9 million, respectively, compared to its fair values of $158.2 million and $114.8 million as of December 31, 2017 and 2016, respectively. The fair value of the long-term debt was calculated using Level 1 inputs, including an active market price.

(14) Benefit Plans

The Company has a 401(k) retirement savings plan, which covers substantially all employees. Employees may voluntarily contribute up to 60% of their compensation, as defined, to the plan. Effective June 1, 2000, the Company adopted a company matching contribution to the 401(k) plan. The Company matched the employee contribution at a rate of 50% of the first 6% of compensation contributed to the plan. Company contributions to the plans were $0.8 million, $0.8 million and $1.4 million, during 2017, 2016 and 2015, respectively.

(15) Selected Quarterly Information — (Unaudited)

A summary of selected quarterly information follows (in thousands, except per share amounts):

	Three Months Ended			
Year Ended December 31, 2017	March 31	June 30	September 30	December 31
Service revenues	$23,828	$34,454	$ 52,615	$ 48,513
Product revenues	8,728	11,547	8,480	9,389
Total net revenues	32,556	46,001	61,095	57,902
Gross profit	6,101	15,618	30,109	23,811
Income (loss) from operations	(13,912)	(3,572)	9,936	(1,151)
Interest expense, net	(4,464)	(4,241)	(3,959)	(4,045)
Other income (expense)	(5,068)	192	722	209
Income tax expense (benefit)	(418)	2,402	1,686	(3,646)
Net (income) loss attributable to noncontrolling interests	(316)	(418)	(78)	(53)
Net income (loss) applicable to ION	$(23,342)	$(10,441)	$ 4,935	$ (1,394)
Net income (loss) per share:				
Basic	$(1.98)	$(0.88)	$ 0.42	$ (0.12)
Diluted	$(1.98)	$(0.88)	$ 0.41	$ (0.12)

	Three Months Ended			
Year Ended December 31, 2016	March 31	June 30	September 30	December 31
Service revenues	$13,156	$25,430	$ 65,914	$ 26,140
Product revenues	9,509	10,722	12,708	9,229
Total net revenues	22,665	36,152	78,622	35,369
Gross profit (loss)	(8,930)	4,853	31,765	8,344
Income (loss) from operations	(30,129)	(16,588)	11,864	(8,318)
Interest expense, net	(4,734)	(4,702)	(4,607)	(4,442)
Other income (expense)	120	(1,717)	(2,027)	4,974
Income tax expense (benefit)	293	2,256	3,316	(1,444)
Net (income) loss attributable to noncontrolling interests	22	(79)	(215)	(149)
Net income (loss) applicable to ION	$(35,014)	$(25,342)	$ 1,699	$ (6,491)
Net income (loss) per share:				
Basic	$(3.30)	$(2.22)	$ 0.14	$ (0.55)
Diluted	$(3.30)	$(2.22)	$ 0.14	$ (0.55)

(16) Certain Relationships and Related Party Transactions

For 2017, 2016 and 2015, the Company recorded revenues from BGP of $4.4 million, $3.6 million and $6.3 million, respectively. Receivables due from BGP were $0.6 million and $0.4 million at December 31, 2017 and 2016, respectively. BGP owned approximately 13.0% of the Company’s outstanding common stock as of December 31, 2017.

Mr. James M. Lapeyre, Jr. is the Chairman of the Board on ION’s board of directors and a significant equity owner of Laitram, L.L.C. (Laitram), and he has served as president of Laitram and its predecessors since 1989. Laitram is a privately-owned, New Orleans-based manufacturer of food processing equipment and modular conveyor belts.

Mr. Lapeyre and Laitram together owned approximately 10.2% of the Company’s outstanding common stock as of December 31, 2017.

The Company acquired DigiCourse, Inc., the Company's marine positioning products business, from Laitram in 1998. In connection with that acquisition, the Company entered into a Continued Services Agreement with Laitram under which Laitram agreed to provide the Company certain bookkeeping, software, manufacturing and maintenance services. Manufacturing services consist primarily of machining of parts for the Company's marine positioning systems. The term of this agreement expired in September 2001 but the Company continues to operate under its terms. In addition, from time to time, when the Company has requested, the legal staff of Laitram has advised the Company on certain intellectual property matters with regard to the Company's marine positioning systems. During 2017, the Company paid Laitram and its affiliates $0.2 million which consisted of manufacturing services and reimbursement of costs. During 2016 and 2015 the Company paid less than $0.1 million in each year for reimbursement for costs related to providing administrative and other back-office support services in connection with the Company's Louisiana marine operations. In addition, the Company is currently subleasing approximately 4,100 square feet of office space to Laitram. In the opinion of the Company's management, the terms of these services are fair and reasonable and as favorable to the Company as those that could have been obtained from unrelated third parties at the time of their performance.

In July 2013, the Company agreed to lend up to $10.0 million to INOVA Geophysical, and received a promissory note issued by INOVA Geophysical to the order of the Company, which was scheduled to mature on September 30, 2013. INOVA Geophysical has repaid a total of $6.0 million, of which $4.0 million remained outstanding at December 31, 2017. INOVA has advised the Company that it is not currently able to repay the outstanding amount. In December 2014, the Company wrote down the book value of this receivable to zero.

(17) Cost Reduction Initiatives and Other Charges

2016 Cost Reduction Initiatives and Other Charges

In April 2016, the Company implemented additional cost saving initiatives by reducing its current workforce by approximately 12%. Additional reductions were needed to further streamline the organization and bring it in line with the Company's current revenue stream, while maintaining the necessary core capabilities to continue our operations and strategic initiatives. In addition, the Company incurred losses in association with the exchange of a portion of its bonds during the second quarter 2016. During the twelve months ended December 31, 2016, the Company recognized the following pre-tax charges (in thousands):

	Severance charges[a]	Loss on bond exchange[b]	Total
Cost of goods sold	$ 1,077	$ —	$1,077
Operating expenses	932	—	932
Other expense	—	2,182	2,182
Consolidated total	$ 2,009	$ 2,182	$4,191

[a] Represents severance charges related to the second quarter 2016 restructurings.

[b] Represents a loss on exchange of bonds during the second quarter 2016.

2015 Cost Reduction Initiatives

During 2015, the Company implemented additional savings initiatives by (i) centralizing the Company's global data processing capabilities to two core geographical hubs in the U.S. and the U.K., (ii) reducing the Company's marine repair infrastructure to two locations in the U.S. and U.A.E., (iii) making further reductions in personnel across all of the Company's segments that, combined with reductions starting in December 2014 and reduced the Company's full-time employee base by approximately 50%. During 2015, the Company recognized the following pre-tax charges and credits (in thousands):

	Severance charges[a]	Facility charges[b]	Total
Cost of goods sold	$ 3,981	$ —	$3,981
Operating expenses	1,910	1,323	3,233
Other (income) expense	—	1,618	1,618
Income tax benefit	(119)	(150)	(269)

Net income attributable to noncontrolling interest	(172)	—	(172)
Consolidated total	$ 5,600	$ 2,791	$ 8,391

(a) Represents severance charges related to 2015 restructurings, a portion of which relates to a noncontrolling interest.

(b) Represents facility charges related to 2015 restructurings.

(18) 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.

In December 2016, the FASB issued amendments to ASC 606, "Revenue from Contracts with Customers". The amendments allow entities not to make quantitative disclosures about remaining performance obligations in certain cases and require entities that use any of the new or previously existing optional exemptions to expand their qualitative disclosures. It also makes additional technical corrections and improvements to the new revenue standard. The guidance will be effective with the same date and transition requirements as those in ASC 606.

The Company will use the modified retrospective adoption method and has concluded that the adoption of ASC 606 will not have a material impact on its consolidated balance sheets or consolidated statement of operations for any of its reporting segments. The Company adopted this ASU on January 1, 2018, and will disclose additional quantitative and qualitative information regarding revenue and cash flows generated from its contracts with customers.

In February 2016, the FASB issued ASU 2016-2, "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 will adopt ASU 2016-2 on January 1, 2019, and estimates this ASU will have a material impact related to its facility operating leases on its consolidated balance sheet.

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 adopted ASU 2016-18 on January 1, 2018 and has concluded that this ASU will not have a material impact its consolidated balance sheet or consolidated statement of operations.

(19) Condensed Consolidating Financial Information

The notes were issued by ION Geophysical Corporation, and are guaranteed by the Company's current material U.S. subsidiaries: GX Technology Corporation, ION Exploration Products (U.S.A.), Inc. and I/O Marine Systems, Inc. ("the Guarantors"), which are 100-percent-owned subsidiaries. The Guarantors have fully and unconditionally guaranteed the payment obligations of ION Geophysical Corporation with respect to these debt securities. The following condensed consolidating financial information presents the results of operations, financial position and cash flows for:

- ION Geophysical Corporation and the guarantor subsidiaries (in each case, reflecting investments in subsidiaries utilizing the equity method of accounting).
- All other nonguarantor subsidiaries.
- 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 notes.

Balance Sheet	December 31, 2017 ION Geophysical Corporation (In thousands)	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
ASSETS					
Current assets:					
Cash and cash equivalents	$39,344	$—	$ 12,712	$—	$ 52,056
Accounts receivable, net	50	9,374	10,054	—	19,478
Unbilled receivables	—	16,666	20,638	—	37,304
Inventories	—	8,686	5,822	—	14,508
Prepaid expenses and other current assets	2,427	769	4,447	—	7,643
Total current assets	41,821	35,495	53,673	—	130,989
Deferred income tax asset	1,264	—	489	—	1,753
Property, plant, equipment and seismic rental equipment, net	511	7,170	44,472	—	52,153
Multi-client data library, net	—	62,438	26,862	—	89,300
Investment in subsidiaries	693,679	321,934	—	(1,015,613)	—
Goodwill	—	—	24,089	—	24,089
Intangible assets, net	—	1,666	—	—	1,666
Intercompany receivables	—	132,184	90,227	(222,411)	—
Other assets	686	145	288	—	1,119
Total assets	$737,961	$561,032	$ 240,100	$(1,238,024)	$ 301,069
LIABILITIES AND EQUITY					
Current liabilities:					
Current maturities of long-term debt	$39,774	$250	$—	$—	$ 40,024
Accounts payable	1,774	20,982	2,195	—	24,951
Accrued expenses	12,284	15,601	10,812	—	38,697
Accrued multi-client data library royalties	—	26,824	211	—	27,035
Deferred revenue	—	3,201	5,709	—	8,910
Total current liabilities	53,832	66,858	18,927	—	139,617
Long-term debt, net of current maturities	116,691	29	—	—	116,720
Intercompany payables	537,417	—	—	(537,417)	—
Other long-term liabilities	454	6,084	7,388	—	13,926
Total liabilities	708,394	72,971	26,315	(537,417)	270,263
Equity:					
Common stock	120	290,460	49,394	(339,854)	120
Additional paid-in capital	903,247	180,701	202,290	(382,991)	903,247
Accumulated earnings (deficit)	(854,921)	248,770	59,307	(308,077)	(854,921)
Accumulated other comprehensive income (loss)	(18,879)	4,372	(19,681)	15,309	(18,879)
Due from ION Geophysical Corporation	—	(236,242)	(78,764)	315,006	—
Total stockholders' equity	29,567	488,061	212,546	(700,607)	29,567
Noncontrolling interests	—	—	1,239	—	1,239
Total equity	29,567	488,061	213,785	(700,607)	30,806
Total liabilities and equity	$737,961	$561,032	$ 240,100	$(1,238,024)	$ 301,069

Balance Sheet	December 31, 2016 ION Geophysical Corporation (In thousands)	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
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	—
Treasury stock	—				—
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

Income Statement	Year Ended December 31, 2017 ION Geophysical Corporation (In thousands)	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
Total net revenues	$—	$ 77,054	$ 120,500	$ —	$ 197,554
Cost of goods sold	—	80,427	41,488	—	121,915
Gross profit (loss)	—	(3,373)	79,012	—	75,639
Total operating expenses	39,000	27,950	17,388	—	84,338
Income (loss) from operations	(39,000)	(31,323)	61,624	—	(8,699)
Interest expense, net	(16,729)	(107)	127	—	(16,709)
Intercompany interest, net	1,084	(6,613)	5,529	—	—
Equity in earnings (losses) of investments	27,696	67,290	—	(94,986)	—
Other income (expense)	(4,610)	(382)	1,047	—	(3,945)
Income (loss) before income taxes	(31,559)	28,865	68,327	(94,986)	(29,353)
Income tax expense (benefit)	(1,317)	(3,175)	4,516	—	24
Net income (loss)	(30,242)	32,040	63,811	(94,986)	(29,377)
Net income attributable to noncontrolling interests	—	—	(865)	—	(865)
Net income (loss) attributable to ION	$(30,242)	$ 32,040	$ 62,946	$ (94,986)	$ (30,242)
Comprehensive net income (loss)	$(27,373)	$ 31,992	$ 65,916	$ (97,043)	$ (26,508)
Comprehensive income attributable to noncontrolling interest	—	—	(865)	—	(865)
Comprehensive net income (loss) attributable to ION	$(27,373)	$ 31,992	$ 65,051	$ (97,043)	$ (27,373)

Income Statement	Year Ended December 31, 2016 ION Geophysical Corporation (In thousands)	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
Total net revenues	$—	$ 79,006	$ 93,802	$ —	$ 172,808
Cost of goods sold	—	84,373	52,403	—	136,776
Gross profit (loss)	—	(5,367)	41,399	—	36,032
Total operating expenses	31,438	27,274	20,491	—	79,203
Income (loss) from operations	(31,438)	(32,641)	20,908	—	(43,171)
Interest expense, net	(18,406)	(173)	94	—	(18,485)
Intercompany interest, net	978	(4,397)	3,419	—	—
Equity in earnings (losses) of investments	(19,756)	23,368	—	(3,612)	—
Other income (expense)	3,528	702	(2,880)	—	1,350
Income (loss) before income taxes	(65,094)	(13,141)	21,541	(3,612)	(60,306)
Income tax expense	54	1,337	3,030	—	4,421
Net income (loss)	(65,148)	(14,478)	18,511	(3,612)	(64,727)
Net income attributable to noncontrolling interests	—	—	(421)	—	(421)
Net income (loss) attributable to ION	$(65,148)	$ (14,478)	$ 18,090	$ (3,612)	$ (65,148)
Comprehensive net income (loss)	$(72,331)	$ (14,478)	$ 10,907	$ 4,208	$ (71,694)
Comprehensive loss attributable to noncontrolling interest	—	—	(421)	—	(421)
Comprehensive net income (loss) attributable to ION	$(72,331)	$ (14,478)	$ 10,486	$ 4,208	$ (72,115)

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Income Statement	Year Ended December 31, 2015 ION Geophysical Corporation (In thousands)	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
Total net revenues	$—	$ 145,615	$ 76,954	$ (1,056)	$ 221,513
Cost of goods sold	—	126,176	88,390	(1,056)	213,510
Gross profit (loss)	—	19,439	(11,436)	—	8,003
Total operating expenses	26,091	47,579	34,965	—	108,635
Loss from operations	(26,091)	(28,140)	(46,401)	—	(100,632)
Interest expense, net	(18,434)	(351)	32	—	(18,753)
Intercompany interest, net	697	(3,140)	2,443	—	—
Equity in earnings (losses) of investments	16,604	(42,953)	—	26,349	—
Other income (expense)	192	101,978	(3,895)	—	98,275
Income (loss) before income taxes	(27,032)	27,394	(47,821)	26,349	(21,110)
Income tax expense (benefit)	(1,910)	5,031	923	—	4,044
Net income (loss)	(25,122)	22,363	(48,744)	26,349	(25,154)
Net loss attributable to noncontrolling interests	—	—	32	—	32
Net income (loss) attributable to ION	$(25,122)	$ 22,363	$ (48,712)	$ 26,349	$ (25,122)
Comprehensive net income (loss)	$(27,096)	$ 20,553	$ (50,551)	$ 29,966	$ (27,128)
Comprehensive income attributable to noncontrolling interest	—	—	32	—	32
Comprehensive net income (loss) attributable to ION	$(27,096)	$ 20,553	$ (50,519)	$ 29,966	$ (27,096)

Statement of Cash Flows	Year Ended December 31, 2017 ION Geophysical Corporation (In thousands)	The Guarantors	All Other Subsidiaries	Total Consolidated
Cash flows from operating activities:				
Net cash provided by (used in) operating activities	$(21,897)	$ 61,390	$ (11,463)	$ 28,030
Cash flows from investing activities:				
Investment in multi-client data library	—	(11,797)	(11,913)	(23,710)
Purchase of property, plant, equipment and seismic rental equipment	(165)	(817)	(81)	(1,063)
Net cash used in investing activities	(165)	(12,614)	(11,994)	(24,773)
Cash flows from financing activities:				
Payments on notes payable and long-term debt	(1,591)	(3,167)	(58)	(4,816)
Cost associated with issuance of debt	(53)	—	—	(53)
Intercompany lending	38,732	(45,609)	6,877	—
Proceeds from employee stock purchases and exercise of stock options	1,619	—	—	1,619
Dividend payment to non-controlling interest	(100)	—	—	(100)
Other financing activities	(243)	—	—	(243)
Net cash provided by (used in) financing activities	38,364	(48,776)	6,819	(3,593)
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	(260)	(260)
Net increase (decrease) in cash and cash equivalents	16,302	—	(16,898)	(596)
Cash and cash equivalents at beginning of period	23,042	—	29,610	52,652

Cash and cash equivalents at end of period	$39,344	$ —	$ 12,712	$ 52,056

Statement of Cash Flows	Year Ended December 31, 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	$(30,154)	$ 52,385	$ (20,660)	$ 1,571
Cash flows from investing activities:				
Investment in multi-client data library	—	(10,985)	(3,899)	(14,884)
Purchase of property, plant, equipment and seismic rental equipment	(73)	(343)	(1,072)	(1,488)
Proceeds from sale of a cost-method investment	2,698	—	—	2,698
Other investing activities	—	30	—	30
Net cash provided by (used in) investing activities	2,625	(11,298)	(4,971)	(13,644)
Cash flows from financing activities:				
Borrowings under revolving line of credit	15,000	—	—	15,000
Repayments under revolving line of credit	(5,000)	—	—	(5,000)
Payments on notes payable and long-term debt	(2,070)	(6,316)	(248)	(8,634)
Cost associated with issuance of debt	(6,744)	—	—	(6,744)
Repurchase of common stock	(964)	—	—	(964)
Intercompany lending	31,867	(34,771)	2,904	—
Payments to repurchase bonds	(15,000)	—	—	(15,000)
Other financing activities	(252)	—	—	(252)
Net cash provided by (used in) financing activities	16,837	(41,087)	2,656	(21,594)
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	1,386	1,386
Net decrease in cash and cash equivalents	(10,692)	—	(21,589)	(32,281)
Cash and cash equivalents at beginning of period	33,734	—	51,199	84,933
Cash and cash equivalents at end of period	$23,042	$ —	$ 29,610	$ 52,652

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Statement of Cash Flows	Year Ended December 31, 2015 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	$(425,310)	$225,581	$183,205	$(16,524)
Cash flows from investing activities:				
Investment in multi-client data library	—	(44,687)	(871)	(45,558)
Purchase of property, plant and equipment	(347)	(3,945)	(14,949)	(19,241)
Other investing activities	—	1,263	—	1,263
Net cash used in investing activities	(347)	(47,369)	(15,820)	(63,536)
Cash flows from financing activities:				
Payments on notes payable and long-term debt	(153)	(6,467)	(832)	(7,452)
Cost associated with issuance of debt	(145)	—	—	(145)
Repurchase of common stock	(1,989)	—	—	(1,989)
Intercompany lending	352,091	(171,745)	(180,346)	—
Other financing activities	73	—	—	73
Net cash provided by (used in) financing activities	349,877	(178,212)	(181,178)	(9,513)
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	898	898
Net decrease in cash and cash equivalents	(75,780)	—	(12,895)	(88,675)
Cash and cash equivalents at beginning of period	109,514	—	64,094	173,608
Cash and cash equivalents at end of period	$33,734	$—	$51,199	$84,933

SCHEDULE II
ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS

Year Ended December 31, 2015	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
Allowances for doubtful accounts	$7,633	$ 1,841	$ (4,555)	$ 4,919
Allowances for doubtful notes receivable	4,000	—	—	4,000
Valuation allowance on deferred tax assets	205,264	(11,009)	—	194,255
Excess and obsolete inventory	29,804	151	(5,480)	24,475

Year Ended December 31, 2016	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
Allowances for doubtful accounts	$4,919	$ 1,834	$ (5,310)	$ 1,443
Allowances for doubtful notes receivable	4,000	—	—	4,000
Valuation allowance on deferred tax assets	194,255	23,334	—	217,589
Excess and obsolete inventory	24,475	429	(9,855)	15,049

Year Ended December 31, 2017	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
Allowances for doubtful accounts	$1,443	$ 949	$ (1,820)	$ 572
Allowances for doubtful notes receivable	4,000	—	—	4,000
Valuation allowance on deferred tax assets	217,589	(64,126)	—	153,463
Excess and obsolete inventory	15,049	398	(408)	15,039