ION GEOPHYSICAL CORP
Form 10-K
February 17, 2015
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
Form 10-K
(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, 2014
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 400
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. þ
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):
Large accelerated filer þ Accelerated filer ¨ Non-accelerated filer ¨ Smaller reporting company ¨
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, 2014 (the last business day of the registrant's second quarter of fiscal 2014), the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $649.8 million based on the closing sale price per share ($4.22) on such date as reported on the New York Stock Exchange.

As of January 30, 2015, the number of shares of common stock, $0.01 par value, outstanding was 164,484,095 shares.

DOCUMENTS INCORPORATED BY REFERENCE

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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 20, 2015, to be filed pursuant to Regulation 14A	Part III

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PART I

Preliminary Note: This Annual Report on Form 10-K contains "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995. Forward-looking statements should be read in conjunction with the cautionary statements and other important factors included in this Form 10-K. See Item 1A. "Risk Factors" for a description of important factors which could cause actual results to differ materially from those contained in the forward-looking statements.

In this Form 10-K, "ION Geophysical," "ION," "the company" (or, "the Company"), "we," "our," "ours" and "us" refer to ION Geophysical Corporation and its consolidated subsidiaries, except where the context otherwise requires or as otherwise indicated. Certain trademarks, service marks and registered marks of ION referred to in this Form 10-K are defined in Item 1. "Business — Intellectual Property."

Item 1. Business

ION is a Delaware corporation. Our predecessor entity was incorporated in 1979. We are a global, technology-focused company that provides geoscience technology, services and solutions to the global oil and gas industry. Our offerings are designed to allow oil and gas exploration and production ("E&P") companies to obtain higher resolution images of the Earth's subsurface during exploration, exploitation and production operations to reduce their risk in exploration and reservoir development. We acquire and process seismic data from seismic surveys in regional data programs, which then become part of our multi-client data library. The seismic surveys for our data library business are pre-funded, or underwritten, in part by our customers, and, with the exception of our ocean bottom seismic ("OBS") data acquisition company, OceanGeo B.V. ("OceanGeo"), we contract with third party seismic data acquisition companies to shoot and acquire the seismic data, all of which is intended to minimize our risk exposure. We serve customers in all major energy producing regions of the world from strategically located offices in 21 cities on six continents.

Seismic imaging plays a fundamental role in hydrocarbon exploration and reservoir development by delineating structures, rock types and fluid locations in the subsurface. Our technologies, services and solutions are used by E&P companies to generate high-resolution images of the Earth's subsurface to identify sources of hydrocarbons and pinpoint drilling locations for wells, which can be costly and involve high risk.

We provide our services and products through four business segments – Solutions, Systems, Software and Ocean Bottom Services. Our Ocean Bottom Services segment is comprised of OceanGeo, in which we increased our ownership from 30% to 100% in 2014. In addition, we have a 49% ownership interest in our INOVA Geophysical Equipment Limited joint venture ("INOVA Geophysical," or "INOVA").

For decades we have been engaged in providing innovative seismic data acquisition technology, such as full-wave imaging capability with VectorSeis® products, the ability to record seismic data from basins that underlie ice fields in polar regions, and cableless seismic techniques. The advanced technologies we currently offer include our Orca® and Gator™ command and control software systems, WiBand® broadband data processing technology, Calypso® OBS acquisition system, Narwhal™ (software system) for ice management, and other technologies, each of which is designed to deliver improvements in both image quality and productivity. In late 2014, we began field testing our new Marlin™ solution for optimizing simultaneous operations during marine seismic data acquisition. We have over 500 patents and pending patent applications in various countries around the world. Approximately 50% of our employees are involved in technical roles and over 25% of our employees have advanced degrees.

Solutions. Our Solutions business provides two distinct service activities that often work together.

Our GeoVentures® services are designed to manage the entire seismic process, from survey planning and design to data acquisition and management, to final subsurface imaging and reservoir characterization. Our GeoVentures group focuses on the technologically intensive components of the image development process, such as survey planning and design, and data processing and interpretation, outsourcing the logistics components (such as field acquisition) to experienced seismic and other geophysical contractors.

Our GX Technology ("GXT") group offers data processing and imaging services designed to help our E&P customers reduce exploration and production risk, evaluate and develop reservoirs, and increase production. GXT develops a series of subsurface images by applying its processing technology to data owned or licensed by its customers. We maintain more than 16 petabytes of seismic data digital information storage in 12 global data centers, including our largest data center in Houston.

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Our Solutions business focuses on providing services and products for challenging environments, such as the Arctic frontier; complex and hard-to-image geologies, such as deepwater subsurface salt formations in the Gulf of Mexico and offshore West Africa and Brazil; unconventional reservoirs, such as those found in shale, tight gas and oil sands formations; and offshore basin-wide seismic data and imaging programs. Since 2002, our basin exploration seismic data programs have resulted in a substantial data library that covers significant portions of many of the frontier basins in the world, including offshore East and West Africa, India, South America, the Arctic, the deepwater Gulf of Mexico and Australia.

Software. Our Software business provides command and control software systems, related software and services for towed marine streamer and seabed operations, as well as survey design. Our Orca software is installed on towed streamer marine vessels worldwide, and our Gator software is a component of many re-deployable and permanent seabed monitoring systems.

In 2013, we introduced our Narwhal for ice management system, and in late 2014, we began field testing our new Marlin solution for optimizing simultaneous operations during marine seismic data acquisition. Both of these systems are part of our E&P software solutions for operations management.

Systems. Our Systems business is engaged in the manufacture of (i) re-deployable ocean bottom cable seismic data acquisition systems and shipboard recorders (for OceanGeo's use in OBS data acquisition); (ii) marine towed streamer positioning and control systems; and (iii) analog geophone sensors.

Ocean Bottom Services. In 2014, we increased our ownership interest in OceanGeo from 30% to 100%. Through the addition of OceanGeo, ION offers a fully integrated OBS solution that includes expert survey design, planning and optimization, to maximize seismic image quality, operational efficiency and safety; safe, efficient data acquisition by the experienced team at OceanGeo; superior imaging via OceanGeo's exclusive use of our VSO systems; and data processing, interpretation and reservoir services, by our GXT experts. For information regarding our acquisition of OceanGeo, see Footnote 3 "Acquisition of OceanGeo" of Footnotes to Consolidated Financial Statements contained elsewhere in this Annual Report on Form 10-K.

INOVA Geophysical. We conduct our land seismic equipment business through INOVA Geophysical, a joint venture with BGP Inc., which is a subsidiary of China National Petroleum Corporation ("CNPC"). BGP is generally regarded as the world's largest land geophysical service contractor. BGP owns a 51% equity interest in INOVA Geophysical, and we own the remaining 49% interest. INOVA manufactures cable-based and cableless seismic data acquisition systems, digital sensors, vibroseis vehicles (i.e., vibrator trucks), and source controllers for detonator and energy source business lines. In connection with the preparation of the financial statements included in this Annual Report on Form 10-K, we wrote our investment in INOVA down to zero as of December 31, 2014. For a discussion of the impairment of our equity method investment in INOVA, see Footnote 5 "Equity Method Investments" of Footnotes to Consolidated Financial Statements contained elsewhere in this Annual Report on Form 10-K.

Seismic Industry Overview

1930s – 1970s. Since the 1930s, oil and gas companies have sought to reduce exploration risk by using seismic data to create an image of the Earth's subsurface. Seismic data is recorded when listening devices placed on the Earth's surface or seabed floor, or carried within the streamer cable of a towed streamer vessel, measure how long it takes for sound vibrations to echo off rock layers underground. For seismic data acquisition onshore, the acoustic energy producing the sound vibrations is generated by the detonation of small explosive charges or by large vibroseis (vibrator) vehicles. In marine acquisition, the energy is provided by a series of air guns that deliver compressed air into the water column.

The acoustic energy propagates through the subsurface as a spherical wave front, or seismic wave. Interfaces between different types of rocks will both reflect and transmit this wave front. Onshore, the reflected signals return to the surface where they are measured by sensitive receivers that are analog coil-spring geophones. Offshore, the reflected signals are recorded by either hydrophones towed in an array behind a streamer acquisition vessel or by multicomponent geophones or MEMS sensors that are placed directly on the seabed. Once the recorded seismic energy is processed using advanced algorithms and workflows, images of the subsurface can be created to depict the structure, lithology (rock type), fracture patterns, and fluid content of subsurface horizons, highlighting the most promising places to drill for oil and natural gas. This processing also aids in engineering decisions, such as drilling

and completion methods, as well as decisions affecting overall reservoir production as well as guiding economic decisions relating to drilling risk and reserves in place.

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Typically, an E&P company engages the services of a geophysical acquisition company to prepare site locations, coordinate logistics, and acquire seismic data in a selected area. The E&P company generally relies upon third parties, such as ION, to provide the contractor with equipment, navigation and data management software, and field support services necessary for data acquisition. After the data is collected, the same geophysical contractor, a third-party data processing company, our data processing services or the E&P company itself will process the data using proprietary algorithms and workflows to create a series of seismic images. Geoscientists then interpret the data by reviewing the images and integrating the geophysical data with other geological and production information such as well logs or core information.

During the 1960s, digital seismic data acquisition systems (which converted the analog output from the geophones into digital data for recording) and computers for seismic data processing were introduced. Using the new systems and computers, the signals could be recorded on magnetic tape and sent to data processors where they could be adjusted and corrected for known distortions. The final processed data was displayed in a form known as “stacked” data. Computer filing, storage, database management, and algorithms used to process the raw data quickly grew more sophisticated, dramatically increasing the amount of subsurface seismic information.

1980s. Until the early 1980s, the primary commercial seismic imaging technology was two-dimensional (“2-D”) technology. 2-D seismic data is recorded using lines of receivers crossing the surface of the Earth. Once processed, 2-D seismic data allows geoscientists to see only a thin vertical slice of the Earth, and that image may be corrupted by reflections originating out of the place of the receiver line. A geoscientist using 2-D seismic technology must speculate on the characteristics of the Earth between the slices and attempt to visualize the true three-dimensional (“3-D”) structure of the subsurface.

The commercial development of 3-D imaging technology in the early 1980s was an important technological milestone for the seismic industry. Previously, the high cost of 3-D seismic data acquisition techniques and the lack of computing power necessary to process, display, and interpret 3-D data on a commercial basis had slowed its widespread adoption. Today’s 3-D seismic techniques record the reflected energy across a series of closely-spaced seismic lines that collectively provide a more holistic, spatially-sampled depiction of geological horizons and, in some cases, rock and fluid properties, within the Earth.

3-D seismic data and the associated computer-based interpretation platforms are designed to allow geoscientists to generate more accurate subsurface maps than could be constructed on the basis of the more widely spaced 2-D seismic lines. In particular, 3-D seismic data provided more detailed information about and higher-quality images of subsurface structures, including the geometry of bedding layers, salt structures, and fault planes. The improved 3-D seismic images allowed the oil and gas industry to discover new reservoirs, reduce finding and development costs, and lower overall hydrocarbon exploration risk. Driven by faster computers and more sophisticated mathematical equations to process the data, the technology advanced quickly.

1990s. As commodity prices decreased in the late 1990s and the pace of innovation in 3-D seismic imaging technology slowed, E&P companies slowed the commissioning of new seismic surveys. Also, business practices employed by geophysical contractors impacted demand for seismic data. In an effort to sustain higher utilization of existing capital assets, geophysical contractors increasingly began to collect speculative seismic data for their own account in the hopes of selling it later to E&P companies. These generic, speculative, multi-client surveys were not tailored to meet the unique imaging objectives of individual clients and caused an oversupply of seismic data in many regions. Additionally, since contractors incurred most of the costs of this speculative seismic data at the time of acquisition, contractors lowered prices to recover as much of their fixed investment as possible, which drove operating margins down. During the 1990’s, the accuracy of 3D seismic surveys improved to the point that a survey acquired after significant oil production could be compared to a pre-production survey, and maps of the drainage pattern of the reservoir could be produced. This technique became known as time lapse, or 4D seismic.

2000s. The conditions from the 1990s continued to prevail until 2004-2005, when commodity prices began increasing and E&P companies increased their capital spending programs, driving higher demand for our services and products. During this time, the use of horizontal drilling and hydraulic fracturing increased, as onshore North American production became economically viable with higher oil prices. These techniques, used to tap unconventional reservoirs, made once “hard to produce” oil and gas accessible and caused an upsurge in North American onshore oil

and gas activity.

The financial crisis that occurred in 2008 and the resulting economic downturn drove hydrocarbon prices down sharply; this had the effect of sharply reducing exploration activities in North America and in many parts of the world. Crude oil prices rebounded in 2013, however, with West Texas Intermediate ("WTI") crude oil prices finishing the year near $110 per barrel, and U.S. oil production surged far beyond what even the most optimistic forecasts predicted. For the first three quarters of 2014, the oil market looked similar to 2013, with oil prices exceeding $100 per barrel. In late June 2014, WTI reached a high for the year of $107. In the fourth quarter of 2014, however, oil prices began to decline significantly, as signs emerged that non-U.S. demand was weakening. The plunge accelerated in late November when OPEC decided to maintain production despite the lower demand and prices. Between September and December 2014, WTI and Brent crude oil prices dropped by approximately half.

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Throughout 2014, oil companies began prioritizing shareholder returns and cash flow generation over hydrocarbon resource growth, minimizing discretionary spending and shifting their focus from exploration to production. This shift is causing a contraction in E&P spending on seismic for exploration purposes, but to date has had little impact on their spending on ocean bottom seismic, which is typically used in the later, development and production phases of the lifecycle, to maximize production of more mature reservoirs. When spending on seismic for exploration purposes contracts, typically the seismic companies hardest hit are towed streamer contractors, who find themselves with excess vessel capacity. In addition, oil and gas companies tend to shift to reprocessing existing seismic data as a more cost-effective alternative to acquiring new data.

Our Strategy

The key elements of our business strategy are to:

- Leverage our key technologies to provide integrated solutions to oil and gas companies, across the entire E&P lifecycle. More of our customers are seeking fully integrated offerings from seismic companies, from survey planning and design, to leading technology differentiation in acquisition and processing. We have transformed ourself from an equipment provider to an integrated service provider, where leading equipment and software technologies underpin our solution offerings. The growth in our Solutions business over the past decade is a testament to our steadfast execution of this strategy. Whereas our solutions, including our BasinSPAN™ 2-D seismic programs, were originally focused on the earlier, frontier exploration, phase of the E&P lifecycle, our newest offering, OBS services through OceanGeo, is geared to the later, less volatile, production phase of the E&P lifecycle leveraging our Calypso OBS data acquisition system.
- Expand and globalize our Solutions business. We seek to expand and grow our Solutions business to new regions, with new customers and new offerings, including proprietary services for E&P companies through our GXT data processing and GeoVentures multi-client businesses. For the foreseeable future, we expect the majority of our future investments to be in research and development and computing infrastructure for our data processing business and to support our GeoVentures multi-client projects. We believe this focus better positions our company as a full-service technology company with an increasing proportion of revenues derived from E&P customers.
- Continue investing in advanced software and equipment technology to provide next generation services and products. We intend to continue investing in the development of new technologies for use by E&P companies. In particular, we intend to focus on the development of the next generation of our OBS data imaging technology and on our Narwhal ice management system and derivative products, with the goal of obtaining technical and market leadership in what we continue to believe are important and expanding markets. In 2014, our investment in research and development was equal to approximately 8% of our total net revenue for the year.
- Collaborate with our customers to provide products and solutions designed to meet their needs. A key element of our business strategy has been to understand the challenges faced by E&P companies in seismic survey planning, seismic data acquisition, processing, and interpretation. We will continue to develop and offer technology and services that enable us to work with E&P companies to solve their unique challenges, especially in the harshest and most extreme environments around the world. We have found that a collaborative relationship with E&P companies, with a goal of better understanding their imaging challenges and then working with them to assure them that the right technologies are properly applied, is the most effective method for meeting their needs. Our goal of being a full solutions provider to solve the most difficult challenges for our customers is an important element of our long-term business strategy, and we are implementing this partnership approach globally through local personnel in our regional organizations who understand the unique challenges in their areas.

Our Strengths

We believe that we are solidly positioned to successfully execute the key elements of our business strategy based on the following competitive strengths:

- We are leveraging our key technologies to provide integrated solutions to oil and gas companies. More of our customers are seeking fully integrated offerings from seismic companies, from survey planning and design, to leading technology differentiation in acquisition and processing. ION has become an integrated service provider, through service offerings by our Solutions segment.
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We are a broad-based seismic solutions provider, with offerings spanning the entire geophysical workflow. We are a technology-focused full-value-chain service provider, with offerings that span the entire seismic workflow, from survey planning and data acquisition to processing and interpretation. Our offerings include seismic data acquisition hardware, data acquisition services, command and control software, value-added services associated with seismic survey design, seismic data processing and interpretation, and seismic data libraries.

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- Our "asset light" strategy enables us to avoid significant fixed costs and to remain financially flexible. We do not own a fleet of marine vessels and, with the exception of OceanGeo, we do not provide our own seismic crews to acquire seismic data. We outsource a majority of our seismic data acquisition activity to third parties that operate their own fleets of seismic acquisition vessels and equipment. Doing so enables us to avoid the fixed costs associated with these assets and personnel and to manage our business in a manner designed to afford us the flexibility to quickly decrease our costs or capital investments in the event of a downturn. We actively manage the costs of developing our multi-client data library business by requiring our customers to partially pre-fund, or underwrite, the investment for any new project. Our target goal is to have customer underwritten investment equal to approximately 75% of the total cost of each new project's data acquisition. We believe this conservative approach to data library investment is the most prudent way to avoid risks of any sudden reduction in the demand for seismic data giving us the flexibility to aggressively reduce cash outflows in the event of an industry downturn.
- Our global footprint and ability to work in harsh conditions allow us to offset regional downturns. Our focus on conducting business around the world, even in the harshest and most extreme environments, has been and will continue to be a key component of our strategy. This global focus has been helpful in minimizing the impact of any one regional slowdown for short or extended periods of time. We believe that our customers prefer to work with companies that are capable of delivering high quality, safe, and environmentally sensitive service in those environments. For example, our operational expertise and equipment and software technologies enable us to operate in the harsh Arctic environment and to acquire seismic data in areas for which no modern seismic data previously existed. This expertise and these technologies permit us to extend the time window for data acquisition, facilitate our customers' drilling decisions, reducing exploration and production risk.
- We have a diversified and blue chip customer base. We provide services and products to a diverse, global customer base that includes many of the largest oil and gas and geophysical companies in the world, including national oil companies (NOCs) and international oil companies (IOCs). Over the past decade, we have made significant progress in expanding our customer list and revenue sources. Whereas almost all of our revenues in 2003 were derived principally from seismic contracting companies, in 2014 E&P companies accounted for approximately 76% of our total revenues. Even though we provide services and products to some of the largest companies in the world, no single customer accounted for more than 10% of our total revenue in 2012, 2013 or 2014. We focus our sales and marketing efforts on high-quality, historically creditworthy customers.

Services and Products

Solutions Segment

Our Solutions segment includes the following:

GeoVentures — Our GeoVentures group provides complete seismic data services, from survey planning and design through data acquisition to final subsurface imaging and reservoir characterization. We work backwards through the seismic workflow, with the final image in mind, to select the optimal survey design, acquisition technology, and processing techniques.

We offer our services to customers on both a proprietary and multi-client (non-exclusive) basis. In both cases, the customers generally pre-fund a majority of the data acquisition costs. For proprietary services, the customer also pays for the imaging and processing but has exclusive ownership of the data after it has been processed. For multi-client surveys, we may assume some of the processing costs, but we retain ownership of the data and receive ongoing revenue from subsequent data license sales.

Since 2002, GeoVentures has acquired and processed a growing multi-client data library consisting of non-exclusive marine and ocean bottom data from around the world. The majority of the data licensed by GeoVentures consists of ultra-deep 2-D seismic data that E&P companies use to evaluate petroleum systems at the basin level, including insights into the character of source rocks and sediments, migration pathways, and reservoir trapping mechanisms. In many cases, we extend beyond seismic data to include magnetic, gravity, well log, and electromagnetic information, to provide a more comprehensive picture of the subsurface. Known as "BasinSPAN" programs, these geophysical surveys cover most major offshore basins worldwide and we're continuing to build on them. In addition to our 2-D multi-client programs, in 2013 we acquired our first 3-D marine proprietary program and signed a strategic agreement with Polarcus Limited, a marine geophysical company, to jointly plan and execute 3-D marine multi-client surveys

worldwide.

For land applications, we also have a library of 3-D onshore reservoir imaging and characterization programs that provide E&P companies with the ability to better understand unconventional reservoirs to maximize production. Known as “ResSCAN™” programs, these 3-D multicomponent seismic data programs were designed, acquired and depth-imaged using advanced geophysical technology and proprietary processing techniques, resulting in high-definition images of the subsurface.

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In connection with the preparation of the financial statements included in this Annual Report on Form 10-K, we wrote down the value of our multi-client data library, primarily associated with Arctic and onshore North American programs, by $100.1 million due to current market conditions. The recent decline in crude oil prices to five-year lows has negatively impacted the economic outlook of our E&P customers. In response to the decline in crude oil prices, E&P companies have turned their focus to spending reductions, with exploration spending receiving the largest reductions and seismic spending being one of the most discretionary parts of their exploration budgets. These reductions in exploration spending have had an impact on our results of operations for 2014, especially those of our Solutions segment. Sales of Arctic programs have been specifically impacted by recent events in Russia and could be further impacted if adverse action is taken by the U.S. government to limit exploration and production activities in Alaska. The decline in crude oil prices, as well as U.S. and European Union sanctions against Russia related to Russia's actions in Ukraine, have both contributed to the devaluation of the Russian ruble putting significant pressure on our Russian-based customers and negatively impacting the appeal of seismic data located in Russia to potential non-Russian buyers. In North America, the land seismic market continues to experience softness. E&P customer spending in the natural gas shale plays has been limited due to associated gas being produced from unconventional oil wells in North America increasing natural gas supplies and putting downward pressure on natural gas prices. The number of rigs working in North America has decreased by approximately 25% since late November 2014.

Seismic Data Processing Services — Our GXT group is a strong market participant in advanced land, and marine seismic data processing, imaging, and reservoir services. In addition to applying processing and imaging technologies to data owned or licensed by its customers, we also provide our customers with seismic data acquisition support services, such as data pre-conditioning for imaging and quality control of seismic data acquisition.

We utilize a globally distributed network of Linux-cluster processing centers in combination with our major hubs in Houston and London to process seismic data using advanced, proprietary algorithms and workflows.

Our GXT group has pioneered several differentiated processing and imaging solutions for both offshore and onshore environments including: Reverse Time Migration, Surface Related Multiple Elimination, and WiBand broadband deghosting. In 2013, we commercially released our new Full Waveform Inversion and non-parametric picking tomography techniques to improve subsurface image resolution in areas with complex geologies. The advantages of these techniques are that they allow for the resolution of complex, small-scale velocity variations. In 2014, we introduced PrecisION™, an innovative compressed seismic inversion technique that is designed to build Earth reconstructions with improved accuracy and aid geoscientists in better quantifying exploration and development risk and uncertainty.

Quantitative Interpretation — The GXT group also offers solutions "downstream" of seismic data processing workflows that enable E&P companies to develop their reservoirs and increase production. This is accomplished by integrating geophysical, geological, petrophysical and rock physics information to identify lithology, fluid or fracture within hydrocarbon reservoirs. Once understood, this information may be used for better well placement and more effective well completions.

At December 31, 2014, our Solutions segment backlog, which consists of commitments for (i) data processing work and (ii) both multi-client new venture and proprietary projects by our GeoVentures group that have been underwritten, was $46.7 million compared with $84.4 million at December 31, 2013. Our Solutions segment's fiscal-year-end backlog includes signed contracts that we can usually fulfill within approximately 6 months.

Software Segment

Through this segment, we supply command and control software systems and related services for towed marine streamer and OBS operations. Software developed by our Concept Systems group is installed on towed streamer marine vessels worldwide and is a component of many re-deployable and permanent ocean bottom monitoring systems. An advantage of our underlying software platform is that it provides common components from which to build other applications. This enables the acceleration of development and commercialization of new products as market opportunities are identified. Our Narwhal for ice management system, which we released in 2013, is such an example, as is Marlin, our new software solution for optimizing simultaneous operations during marine seismic data acquisition.

Products and services for our Software segment include the following:

Towed Streamer Navigation System — Our command and control software for towed streamer acquisition, Orca, integrates acquisition, planning, positioning, source and quality control systems into a seamless operation.
Seabed Navigation System — Gator II is our integrated navigation and data management system for multi-vessel OBS and transition zone operations.

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Survey Planning and Optimization — We offer consulting services for planning and supervising complex surveys, including for 4-D (time lapse) and Wide Azimuth Towed Streamer survey operations. Our acquisition expertise and in-field software platforms are designed to allow clients, including both oil companies and seismic data acquisition contractors, to optimize these complex surveys, improving efficiencies, data quality and reducing costs. Our Orca and Gator systems are designed to integrate with our post-survey tools for processing, analysis and data quality control, including the use of our Reflex® software for seismic coverage and attribute analysis. Our proprietary technology known as Optimiser™ is designed to enable improved, safer acquisition through analysis and prediction of sea currents and integration of the information into the acquisition plan.

Operations Management — In 2013, we introduced the first fully integrated ice management system designed to reduce risk and improve efficiency in seismic data acquisition and drilling operations in or near ice, such as in the Arctic. The patented Narwhal system enables operators to gather, monitor and analyze data from various sources, including satellite imagery, ice charts, radar, manual observations, wind and ocean currents, to forecast and predict ice movements in these harsh environments. With this ability to track, forecast and monitor potential ice threats, operators can make informed, proactive decisions to ensure the safety of individuals, assets and the environment, while minimizing operational downtime. More importantly, we applied this technology to develop our new Marlin solution for managing simultaneous operations during marine seismic data acquisition.

Systems Segment

Our Systems segment products include the following:

Marine Acquisition Systems — We believe that the market for seabed seismic imaging is growing. E&P companies have shown increased interest in seabed seismic activities, consistent with their desire for higher-quality seismic imaging for complex geological formations and more detailed reservoir characteristics. Since introducing our first seabed acquisition system, VSO, in 2004, we have continued to develop advanced seabed systems, which we are putting to use through OceanGeo.

We also manufacture marine acquisition systems, consisting of towed marine streamers and shipboard electronics that collect seismic data in water depths of greater than 30 meters. Marine streamers, which contain hydrophones, electronic modules and cabling, may measure up to 12,000 meters in length and are towed (up to 20 at a time) behind a seismic acquisition vessel. The hydrophones detect acoustical energy transmitted through water from the Earth's subsurface structures. Our DigiSTREAMER™ system uses solid streamer and integrated continuous acquisition technology for towed streamer operations.

Marine Positioning Systems — Our manufactured DigiCOURSE® marine streamer positioning system includes streamer cable depth control devices, lateral control devices, compasses, acoustic positioning systems and other auxiliary sensors. This equipment is designed to control the vertical and horizontal positioning of the streamer cables and provides acoustic, compass and depth measurements to allow processors to tie navigation and location data to geophysical data to determine the location of potential hydrocarbon reserves. DigiFIN® is an advanced lateral streamer control system that we commercialized in 2008. DigiFIN is designed to maintain tighter, more uniform marine streamer separation along the entire length of the streamer cable, which allows for better sampling of seismic data and improved subsurface images. We believe that DigiFIN also enables faster line changes and minimizes the requirements for in-fill seismic work.

Geophones — Geophones are land analog sensor devices that measure acoustic energy reflected from rock layers in the Earth's subsurface using a mechanical, coil-spring element. We manufacture and market a full suite of geophones and geophone test equipment that operate in most environments, including land surface, transition zone and downhole. Our analog geophones are used in other industries as well.

Ocean Bottom Services Segment

Through the addition of OceanGeo, ION offers a fully-integrated OBS solution that includes expert survey design, planning and optimization, to maximize seismic image quality, operational efficiency and safety; safe, efficient data acquisition by the experienced team at OceanGeo; superior imaging via OceanGeo's exclusive use of our VSO systems; and data processing, interpretation and reservoir services by our GXT group.

INOVA Geophysical Products

INOVA manufactures cable-based (G3i® and ARIES®) and cableless (Hawk®) seismic data acquisition systems, digital sensors (AccuSeis™ and VectorSeis), vibroseis vehicles (i.e., vibrator trucks, known as AHV-IV™ and UNIVIB®) and source controllers for detonator and energy source (Vib Pro™ and Shot Pro™ II) business lines. In connection with the preparation of the financial statements included in this Annual Report on Form 10-K, we wrote our investment in INOVA down to zero as of December 31, 2014. For a discussion of the impairment of our equity method investment in INOVA, see Footnote 5 “Equity Method Investments” of Footnotes to Consolidated Financial Statements contained elsewhere in this Annual Report on Form 10-K.

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Product Research and Development

Our ability to compete effectively in the seismic imaging market depends principally upon continued technological innovation in our underlying technologies. As such, the overall focus of our research and development efforts has remained on improving both the quality of the subsurface images we generate and the economics of the seismic data acquisition that lies behind the imaging. In particular, we have concentrated on enhancing the nature and quality of the information that can be extracted from the subsurface images.

During 2014, our R&D efforts were aimed at developing strategic key technologies across all business lines. A large part of this effort was focused on the final phases of development of our Calypso re-deployable ocean bottom acquisition system, which we plan to put into service through our Ocean Bottom Services segment. Within the seismic data processing business, we continued to invest in productivity enhancements and in technologies aimed at handling increasingly complex data acquisition environments and at areas with difficult-to-image subsurface geology. We invested in the further development of our processing-based broadband marine seismic solution, WiBand, and in Marlin, a new software system for managing simultaneous marine seismic operations. We also continued research and development into maximizing the value of full-wave seismic data, particularly the extraction of new and more accurate subsurface information with a special emphasis on shale plays and marine seabed imaging.

As many of these new services and products are under development and, as the development cycles from initial conception through to commercial introduction can extend over a number of years, their commercial feasibility or degree of commercial acceptance may not yet be established. No assurance can be given concerning the successful development of any new service or product, any enhancements to them, the specific timing of their release or their level of acceptance in the marketplace.

Markets and Customers

Our primary customers are E&P companies to whom we market and offer services, primarily imaging-related processing services from our GXT data processing group, multi-client seismic data programs from our GeoVentures group, and OBS data acquisition services through OceanGeo, as well as consulting services from our Concept Systems software group. Secondarily, seismic contractors purchase our towed marine data acquisition systems and related equipment and software to collect data in accordance with their E&P company customers' specifications or for their own seismic data libraries.

A significant part of our marketing effort is focused on areas outside of the United States. Foreign sales are subject to special risks inherent in doing business outside of the United States, including the risk of political instability, armed conflict, civil disturbances, currency fluctuations, embargo and governmental activities, customer credit risks and risk of non-compliance with U.S. and foreign laws, including tariff regulations and import/export restrictions.

We sell our services and products through a direct sales force consisting of employees and international third-party sales representatives responsible for key geographic areas. The majority of our foreign sales are denominated in U.S. dollars. During 2014, 2013 and 2012, sales to destinations outside of North America accounted for approximately 74%, 73% and 69% of our consolidated net revenues, respectively. Further, systems and equipment sold to domestic customers are frequently deployed internationally and, from time to time, certain foreign sales require export licenses. Traditionally, our business has been seasonal, with strongest demand typically in the fourth quarter of our fiscal year. For information concerning the geographic breakdown of our net revenues, see Footnote 4 "Segment and Geographic Information" of Footnotes to Consolidated Financial Statements contained elsewhere in this Annual Report on Form 10-K for additional information.

Competition

Our GXT group within our Solutions segment competes with more than a dozen companies that provide data processing services to E&P companies. See " – Services and Products – Solutions Segment." While the barriers to enter this market are relatively low, we believe the barriers to compete at the higher end of the market–the advanced pre-stack depth migration market where our efforts are focused–are significantly higher. At the higher end of this market, CGG (an integrated geophysical company) and Schlumberger, (a large integrated oilfield services company) are our Solutions segment's two primary competitors for advanced imaging services. Both of these companies are significantly larger than ION in terms of revenue, processing locations, and sales, marketing and financial resources. In addition, both CGG and Schlumberger possess an advantage in the data processing arena, as part of more vertically

integrated seismic contractor companies; for example, when these companies acquire large 3-D multi-client surveys, the internal data processing organization will usually be awarded the data processing without any requirement to compete with external vendors. CGG and Schlumberger, along with other competitors, TGS-NOPEC Geophysical Company ASA and Spectrum ASA, also develop and sell data libraries that compete with our BasinSPAN data library.

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In the OBS market, OceanGeo competes with a number of companies, including WesternGeco, Fairfield Nodal, Seabed GeoSolutions (a joint venture of Fugro and CGG) and Magseis. The OBS market primarily addresses the production end of the E&P business, and is less susceptible to the volatile short-term business cycles experienced in the exploration business. Consequently, the OBS market has been a more stable segment than our other segments of the seismic industry. This market is primarily vertically integrated with a variety of proprietary technologies, comprising both cable and nodal systems. Most companies operate 1-3 crews, and there have been 3 new entrants in the last few years.

In the land seismic equipment market, where INOVA competes, the principal competitors are Sercel (a manufacturing subsidiary of CGG) and Geospace Technologies. INOVA is a joint venture with BGP as a majority stake owner. BGP purchases land seismic equipment from both INOVA and its competitors, including a large recent purchase from Sercel.

The market for seismic services and products is highly competitive and characterized by frequent changes in technology. Our principal competitor for marine seismic equipment is Sercel. Sercel has the advantage of being able to sell its products and services to its parent company that operates both land and marine crews, providing it with a significant and stable internal market and a greater ability to test new technology in the field. The recent downturn in the industry has disrupted traditional buying patterns. We have seen a generally increasing trend of companies such as Petroleum GeoServices ASA (“PGS”) developing their own instrumentation to create competitive advantage through products such as Geostreamer. However, in apparent opposition to the trend, the recent announcement that Dolphin would purchase seismic streamers from Schlumberger suggests that Schlumberger is now willing to monetize technology previously considered to be for internal use only. We also compete with other seismic equipment companies on a product-by-product basis. Our ability to compete effectively in the manufacture and sale of seismic instruments and data acquisition systems depends principally upon continued technological innovation, as well as pricing, system reliability, reputation for quality and ability to deliver on schedule.

Some seismic contractors design, engineer and manufacture seismic acquisition technology in-house (or through a network of third-party vendors) to differentiate themselves. Although this technology competes directly with our marine streamer, ocean bottom and land acquisition equipment, it is not usually made available to other seismic acquisition contractors. However, the risk exists that other seismic contractors may decide to develop their own seismic technology, which would put additional pressure on the demand for our acquisition equipment.

In addition, we expect some reduction in the market for spare parts and service of existing equipment as a result of the fleet reductions currently occurring in the marine seismic market. By 2017, we expect the number of 2-D and 3-D marine streamer vessels, including those in operation, under construction, or announced additions to capacity, to increase by three, to approximately 118 vessels total. However, this 2017 projection has decreased by 35 vessels from the projection one year ago due to fleet reductions and conversions to source vessels. In addition, there has been an increase in recent years of consolidation within the sector, with the major vessel operators - CGG, WesternGeco and PGS - all acquiring new market entrants in the last several years. In 2013, CGG acquired the geoscience division of Fugro, an international energy infrastructure company. This acquisition resulted in more than 75% of the high-end 3-D seismic capacity being concentrated among the largest three companies - CGG, WesternGeco and PGS. Those three companies are vertically integrated with technology that uniquely differentiates them from the rest of the players. This consolidation reduces the number of potential customers and vessel outfitting opportunities for us. During the downturn in the price of crude oil and the resulting reduction in capital expenditures by E&P companies, we anticipate that older, smaller and less efficient vessels will drop out of the fleet to be replaced by newer vessels.

Intellectual Property

We rely on a combination of patents, copyrights, trademark, trade secrets, confidentiality procedures and contractual provisions to protect our proprietary technologies. We have more than 500 patents and pending patent applications, including filings in international jurisdictions with respect to the same kinds of technologies. Although our portfolio of patents is considered important to our operations, and particular patents may be material to specific business lines, no one patent is considered essential to our consolidated business operations.

Our patents, copyrights and trademarks offer us only limited protection. Our competitors may attempt to copy aspects of our products despite our efforts to protect our proprietary rights, or may design around the proprietary features of

our products. Policing unauthorized use of our proprietary rights is difficult, and we may be unable to determine the extent to which such use occurs. Our difficulties are compounded in certain foreign countries where the laws do not offer as much protection for proprietary rights as the laws of the United States. From time to time, third parties inquire and claim that we have infringed upon their intellectual property rights and we make similar inquiries and claims to third parties. Material intellectual property litigation is discussed in detail in Item 3. “Legal Proceedings.”

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The information contained in this Annual Report on Form 10-K contains references to trademarks, service marks and registered marks of ION and our subsidiaries, as indicated. Except where stated otherwise or unless the context otherwise requires, the terms “GeoVentures,” “VectorSeis,” “ARIES II,” “DigiFIN,” “DigiCOURSE,” “Hawk,” “Orca,” “Refle “Calypso,” “WiBand,” and “UNIVIB” refer to the GEOVENTURES®, VECTORSEIS®, ARIES® II, DIGIFIN®, DIGICOURSE®, Hawk®, ORCA®, REFLEX®, G3i®, Calypso®, WiBand®, and UNIVIB® registered marks owned by ION or INOVA Geophysical, and the terms “BasinSPAN,” “DigiSTREAMER,” “Gator,” “AHV-IV,” “Vib Pro,” “Shot Pro,” “Optimiser,” “ResSCAN,” “Connex,” “Narwhal,” “AccuSeis,” “PrecisION” and “Marlin” refer to the BasinSPAN™, DigiSTR GATOR™, AHV-IV™, Vib Pro™, Shot Pro™, Optimiser™, ResSCAN™, Connex™, Narwhal™, AccuSeis™, PrecisION™ trademarks and service marks owned by ION or INOVA Geophysical.

Regulatory Matters

Our operations are subject to various international conventions, laws and regulations in the countries in which we operate, including laws and regulations relating to the importation of and operation of seismic equipment, currency conversions and repatriation, oil and gas exploration and development, taxation of offshore earnings and earnings of expatriate personnel, environmental protection, the use of local employees and suppliers by foreign contractors and duties on the importation and exportation of equipment. Our operations are subject to government policies and product certification requirements worldwide. Governments in some foreign countries have become increasingly active in regulating the companies holding concessions, the exploration for oil and gas and other aspects of the oil and gas industries in their countries. In some areas of the world, this governmental activity has adversely affected the amount of exploration and development work done by major oil and gas companies and may continue to do so. Operations in less developed countries can be subject to legal systems that are not as mature or predictable as those in more developed countries, which can lead to greater uncertainty in legal matters and proceedings.

Changes in these conventions, regulations, policies or requirements could affect the demand for our services and products or result in the need to modify them, which may involve substantial costs or delays in sales and could have an adverse effect on our future operating results. Our export activities are subject to extensive and evolving trade regulations. Certain countries are subject to trade restrictions, embargoes and sanctions imposed by the U.S. government. These restrictions and sanctions prohibit or limit us from participating in certain business activities in those countries.

Our operations are also subject to numerous local, state and federal laws and regulations in the United States and in foreign jurisdictions concerning the containment and disposal of hazardous materials, the remediation of contaminated properties and the protection of the environment. While the industry has experienced an increase in general environmental regulation worldwide and laws and regulations protecting the environment have generally become more stringent, we do not believe compliance with these regulations has resulted in a material adverse effect on our business or results of operations, and we do not currently foresee the need for significant expenditures in order to be able to remain compliant in all material respects with current environmental protection laws. Regulations in this area are subject to change, and there can be no assurance that future laws or regulations will not have a material adverse effect on us.

The Deepwater Horizon incident in the U.S. Gulf of Mexico in April 2010 resulted in a moratorium on certain offshore drilling activities by the Bureau of Ocean Energy Management, Regulation and Enforcement (formerly known as the Minerals Management Service and which was replaced effective October 1, 2011 by two new, independent bureaus – the Bureau of Safety and Environmental Enforcement (“BSEE”) and the Bureau of Ocean Energy Management (“BOEM”)). The BSEE and BOEM issued safety and environmental guidelines and regulations for drilling in the Gulf of Mexico and other offshore regions, and may take other steps that could increase the costs of exploration and production, reduce the area of operations and result in additional permitting delays in the Gulf of Mexico.

We do not engage in hydraulic fracturing services, a commonly used process in the completion of oil and natural gas wells in low permeability formations such as shales, which involves the injection of water, proppants and chemicals under pressure into the target reservoir to stimulate hydrocarbon production. Our business, however, is dependent on the level of activity by our E&P customers, and hydrocarbons cannot be economically produced from certain reservoirs without extensive fracturing. Due to public concerns about any environmental impact that hydraulic fracturing may have, including potential impairment of groundwater quality, certain legislative and regulatory efforts

at the federal, state and local levels have been initiated to impose more stringent permitting and compliance obligations on these operations. Any legislative and regulatory initiatives imposing significant additional restrictions on, or otherwise limiting, the hydraulic fracturing process could make it more difficult or costly to complete natural gas and oil wells. In the event such requirements are enacted, demand for our ResSCAN shale data libraries and seismic data acquisition services may be adversely affected.

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Our customers' operations are also significantly impacted in other respects by laws and regulations concerning the protection of the environment and endangered species. For instance, many of our marine contractors have been affected by regulations protecting marine mammals in the Gulf of Mexico. To the extent that our customers' operations are disrupted by future laws and regulations, our business and results of operations may be materially adversely affected.

Employees

As of December 31, 2014, we had 879 regular, full-time employees, 569 of whom were located in the U.S. From time to time and on an as-needed basis, we supplement our regular workforce with individuals that we hire temporarily or retain as independent contractors in order to meet certain internal manufacturing or other business needs. Our U.S. employees are not represented by any collective bargaining agreement, and we have never experienced a labor-related work stoppage. We believe that our employee relations are satisfactory.

Financial Information by Segment and Geographic Area

For a discussion of financial information by business segment and geographic area, see Footnote 4 "Segment and Geographic Information" of Footnotes to Consolidated Financial Statements.

Available Information

Our executive headquarters are located at 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. Our international sales headquarters are located at LOB 16, office 504, Jebel Ali Free Zone, P.O. Box 18627, Dubai, United Arab Emirates. Our telephone number is (281) 933-3339. Our home page on the internet is www.iongeo.com. We make our website content available for information purposes only. Unless specifically incorporated by reference in this Annual Report on Form 10-K, information that you may find on our website is not part of this report.

In portions of this Annual Report on Form 10-K, we incorporate by reference information from parts of other documents filed with the Securities and Exchange Commission ("SEC"). The SEC allows us to disclose important information by referring to it in this manner, and you should review this information. We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, annual reports to stockholders, and proxy statements for our stockholders' meetings, as well as any amendments, available free of charge through our website as soon as reasonably practicable after we electronically file those materials with, or furnish them to, the SEC.

You can learn more about us by reviewing our SEC filings on our website. Our SEC reports can be accessed through the Investor Relations section on our website. The SEC also maintains a website at www.sec.gov that contains reports, proxy statements, and other information regarding SEC registrants, including our company.

Item 1A. Risk Factors

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

- the expected outcome of the WesternGeco litigation and future potential adverse effects on our liquidity in the event that we must collateralize our appeal bond for the full amount of the bond or are unsuccessful in our appeal of the judgment;
- future oil and gas commodity prices;
- future levels of capital expenditures of our customers for seismic activities;
- the effects of current and future worldwide economic conditions (particularly in developing countries) and demand for oil and natural gas and seismic equipment and services;
- the effects of current and future unrest in the Middle East, North Africa and other regions, including Ukraine;
- the timing of anticipated revenues and the recognition of those revenues for financial accounting purposes;

- the effects of ongoing and future industry consolidation, including, in particular, the effects of consolidation and vertical integration in the towed marine seismic streamers market;

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- the timing of future revenue realization of anticipated orders for multi-client survey projects and data processing work in our Solutions segment;
- future levels of our capital expenditures;
- future government regulations, particularly in the Gulf of Mexico;
- expected net revenues, income from operations and net income;
- expected gross margins for our services and products;
- future benefits to be derived from our INOVA Geophysical joint venture;
- future benefits to be derived from our OceanGeo subsidiary;
- future seismic industry fundamentals, including future demand for seismic services and equipment;
- future benefits to our customers to be derived from new services and products;
- future benefits to be derived from our investments in technologies, joint ventures and acquired companies;
- future growth rates for our services and products;
- the degree and rate of future market acceptance of our new services and products;
- expectations regarding E&P companies and seismic contractor end-users purchasing our more technologically-advanced services and products;
- anticipated timing and success of commercialization and capabilities of services and products under development and start-up costs associated with their development;
- future cash needs and future availability of cash to fund our operations and pay our obligations;
- potential future acquisitions;
- future opportunities for new products and projected research and development expenses;
- expected continued compliance with our debt financial covenants;
- expectations regarding realization of deferred tax assets; and
- anticipated results with respect to certain estimates we make for financial accounting purposes.

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

An unfavorable outcome in our pending litigation matter with WesternGeco could have a materially adverse effect on our financial results and liquidity.

In August 2012, a jury in the WesternGeco L.L.C. v. ION Geophysical Corporation litigation returned a verdict of approximately $105.9 million in damages against us (for additional information, see Item 3. “Legal Proceedings” below). In June 2013, the presiding judge entered a Memorandum and Order denying our 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 is 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 are subject to supplemental damages and also ruling that the supplemental damages applicable to the additional units should be calculated by adding together the jury’s previous reasonable royalty and lost profits damages awards per unit, resulting in supplemental damages of $73.1 million.

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

In May 2014, the judge signed and entered a Final Judgment in the amount of $123.8 million. Also, the Final Judgment included an injunction that enjoins us, our agents and anyone acting in concert with us, from supplying in or from the United States the DigiFIN product or any parts unique to the DigiFIN product, or any instrumentality no

more than colorably different

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from any of these products or parts, for combination outside of the United States. We have conducted our business in compliance with the Court's orders in the case, and we have reorganized our operations such that we no longer supply the DigiFIN product or any parts unique to the DigiFIN product in or from the United States.

As previously disclosed, we have taken a loss contingency accrual of $123.8 million related to this case. Post-judgment interest will continue to accrue until this legal matter is fully resolved.

We and WesternGeco have each appealed the Final Judgment to the United States Court of Appeals for the Federal Circuit. We filed our appeal brief on September 4, 2014. WesternGeco's appeal brief was filed on October 21, 2014. Oral arguments have been scheduled for March 5, 2015. If the adverse ruling is affirmed, we intend to pursue all available opportunities to make further appeals.

In order to stay the judgment during the appeal, we arranged with sureties to post an appeal bond with the trial court on our behalf in the amount of $120.0 million. The terms of the appeal bond arrangements provide the sureties the contractual right for as long as the bond is outstanding to require us to post cash collateral for up to the full amount of the bond. If the sureties exercise their right to require collateral while the appeal bond is outstanding, we would intend to utilize a combination of cash on hand and undrawn balances available under our New Credit Facility (as defined below). If we are required to collateralize the full amount of the bond, we might also seek additional debt and/or equity financing. The collateralization of the full amount of the bond could have a material adverse effect on our liquidity. Any requirement that we collateralize the appeal bond will reduce our liquidity and may reduce the borrowings otherwise available under our New Credit Facility. No assurances can be made whether our efforts to raise additional cash would be successful and, if so, on what terms and conditions, and at what cost we might be able to secure any such financing. For additional discussion about our liquidity related to posting an appeal bond, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Meeting our Liquidity Requirements — Loss Contingency – WesternGeco Lawsuit" in Part II of this Form 10-K.

If our efforts on appeal to reverse or reduce the verdict substantially are unsuccessful, it would likely have the effect of reducing our capital resources available to fund our operations and take advantage of certain business opportunities, which could have a material adverse effect on our business, results of operations and financial condition.

We may not ultimately prevail in the appeals process and we could be required to pay damages up to the amount of the loss contingency accrual plus any additional amount ordered by the court. Our assessment of our potential loss contingency may change in the future due to developments at the appellate court and other events, such as changes in applicable law, and such reassessment could lead to the determination that no loss contingency is probable or that a greater loss contingency is probable, which could have a material effect on our business, financial condition and results of operations. Amounts of estimated loss contingency accruals as 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 exceed or be considerably less than these accrual amounts.

Our business depends on the level of exploration and production activities by the oil and natural gas industry. If crude oil and natural gas prices or the level of capital expenditures by E&P companies were to further decline, demand for our services and products would decline and our results of operations would be materially adversely affected.

Demand for our services and products depends upon the level of spending by E&P companies and seismic contractors for exploration and production activities, and those activities depend in large part on oil and gas prices. Spending by our customers on services and products that we provide is highly discretionary in nature, and subject to rapid and material change. Any further significant decline in oil and gas related spending on behalf of our customers could cause alterations in our capital spending plans, project modifications, delays or cancellations, general business disruptions or delays in payment, or non-payment of amounts that are owed to us, any one of which could have a material adverse effect on our financial condition and results of operations and on our ability to continue to satisfy all of the covenants in our debt agreements. Additionally, increases in oil and gas prices may not increase demand for our services and products or otherwise have a positive effect on our financial condition or results of operations. E&P companies' willingness to explore, develop and produce depends largely upon prevailing industry conditions that are influenced by numerous factors over which our management has no control, such as:

- the supply of and demand for oil and gas;
- the level of prices, and expectations about future prices, of oil and gas;

- the cost of exploring for, developing, producing and delivering oil and gas;
- the expected rates of decline for current production;
- the discovery rates of new oil and gas reserves;
- weather conditions, including hurricanes, that can affect oil and gas operations over a wide area, as well as less severe inclement weather that can preclude or delay seismic data acquisition;

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- domestic and worldwide economic conditions;
- political instability in oil and gas producing countries;
- technical advances affecting energy consumption;
- government policies regarding the exploration, production and development of oil and gas reserves;
- the ability of oil and gas producers to raise equity capital and debt financing; and
- merger and divestiture activity among oil and gas companies and seismic contractors.

In recent months, crude oil prices have dropped by approximately 45%–50% as the non-U.S. economic outlook continues to weaken, North American production continues to expand, and more recently, Saudi Arabia has publicly stated its intention to support its global market share at the expense of lower prices.

The weakening economic outlook for non-U.S. oil demand, especially in Europe, has put more downward pressure on prices. Thus, the bottom-end of the price range for crude oil has decreased significantly beginning in the fourth quarter of 2014 compared to 2013.

In 2013, we started seeing decreased spending on exploration by E&P companies. As a result of recent decreases in crude oil prices, many E&P companies have announced that they are reducing their capital expenditures, which has resulted in diminished demand for our services and products and has caused downward pressure on the prices we charge or the level of work we do for our customers.

The level of oil and gas exploration and production activity has been volatile in recent years. Previously forecasted upward trends in oil and gas exploration and development activities have not continued and, in fact as discussed above, have declined, together with demand for our services and products. Any prolonged substantial reduction in oil and gas prices would likely further affect oil and gas production levels and therefore adversely affect demand for the services we provide and products we sell.

Our operating results often fluctuate from period to period, and we are subject to cyclicality and seasonality factors.

Our industry and the oil and gas industry in general are subject to cyclical fluctuations. Demand for our services and products depends upon spending levels by E&P companies for exploration, production, development and field management of oil and natural gas reserves and, in the case of new seismic data creation, the willingness of those companies to forgo ownership in the seismic data. Capital expenditures by E&P companies for these activities depend upon several factors, including actual and forecasted prices of oil and natural gas and those companies' short-term and strategic plans.

After a period of exploration-focused activities by E&P companies in recent years, recent studies have indicated that many E&P companies in 2015 will focus more on production activities and less on exploration of prospects. The major national and independent oil companies may have determined to pause in their efforts to acquire exploration seismic data and focus more on the exploitation of their discoveries. The smaller independents may, in turn, focus on asset sales during 2015. As of December 31, 2014, our Solutions segment backlog, consisting of commitments for data processing work and for underwritten multi-client new venture and proprietary projects by our GeoVentures group, was 45% less than our backlog existing as of December 31, 2013.

Our operating results are subject to fluctuations from period to period as a result of new service or product introductions, the timing of significant expenses in connection with customer orders, unrealized sales, levels of research and development activities in different periods, the product and service mix of our revenues and the seasonality of our business. Because some of our products feature a high sales price and are technologically complex, we generally experience long sales cycles for these types of products and historically incur significant expense at the beginning of these cycles for component parts and other inventory necessary to manufacture a product in anticipation of a future sale, which may not ultimately occur. In addition, the revenues can vary widely from period to period due to changes in customer requirements and demand. These factors can create fluctuations in our net revenues and results of operations from period to period. Variability in our overall gross margins for any period, which depend on the percentages of higher-margin and lower-margin services and products sold in that period, compounds these uncertainties. As a result, if net revenues or gross margins fall below expectations, our results of operations and financial condition will likely be materially adversely affected.

Additionally, our business can be seasonal in nature, with strongest demand typically in the fourth calendar quarter of each year. Customer budgeting cycles at times result in higher spending activity levels by our customers at different

points of the year.

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Due to the relatively high sales price of many of our products and seismic data libraries, our quarterly operating results have historically fluctuated from period to period due to the timing of orders and shipments and the mix of services and products sold. This uneven pattern makes financial predictions for any given period difficult, increases the risk of unanticipated variations in our quarterly results and financial condition, and places challenges on our inventory management. Delays caused by factors beyond our control, such as the granting of permits for seismic surveys by third parties, the effect from disasters such as the Deepwater Horizon incident in the Gulf of Mexico and the availability and equipping of marine vessels, can affect our Solutions segment's revenues from its processing and GeoVentures services from period to period. Also, delays in ordering products or in shipping or delivering products in a given period could significantly affect our results of operations for that period. While we experienced an all-time record for data library sales in the fourth quarter of 2013, sales in 2014 have been negatively impacted by a softening of exploration spending by our E&P customers. Fluctuations in our quarterly operating results may cause greater volatility in the market price of our common stock.

We are subject to intense competition, which could limit our ability to maintain or increase our market share or to maintain our prices at profitable levels.

Many of our sales are obtained through a competitive bidding process, which is standard for our industry. Competitive factors in recent years have included price, technological expertise, and a reputation for quality, safety and dependability. While no single company competes with us in all of our segments, we are subject to intense competition in each of our segments. New entrants in many of the markets in which certain of our services and products are currently strong should be expected. See Item 1. "Business – Competition." We compete with companies that are larger than we are in terms of revenues, technical personnel, number of processing locations and sales and marketing resources. A few of our competitors have a competitive advantage in being part of a large affiliated seismic contractor company. In addition, we compete with major service providers and government-sponsored enterprises and affiliates. Some of our competitors conduct seismic data acquisition operations as part of their regular business, which we have traditionally not conducted, and have greater financial and other resources than we do. These and other competitors may be better positioned to withstand and adjust more quickly to volatile market conditions, such as fluctuations in oil and natural gas prices, as well as changes in government regulations. In addition, any excess supply of services and products in the seismic services market could apply downward pressure on prices for our services and products. The negative effects of the competitive environment in which we operate could have a material adverse effect on our results of operations. In particular, the consolidation in recent years of many of our competitors in the seismic services and products markets has negatively impacted our results of operations.

There are a number of geophysical companies that create, market and license seismic data and maintain seismic libraries. Competition for acquisition of new seismic data among geophysical service providers historically has been intense and we expect this competition will continue to be intense. Larger and better-financed operators could enjoy an advantage over us in a competitive environment for new data.

Our new OceanGeo subsidiary involves numerous risks.

Our new OceanGeo subsidiary is focused on operating as a seismic acquisition contractor concentrating on marine seabed OBS data acquisition. There can be no assurance that we will achieve the expected benefits from this new company. OceanGeo (and any future acquisitions that we may undertake) may result in unexpected costs, expenses and liabilities, which may have a material adverse effect on our business, financial condition or results of operations. OceanGeo may encounter difficulties in developing and expanding its business. We may experience difficulties in funding future capital contributions to OceanGeo.

OceanGeo's business exposes us to the operating risks of being a seismic contractor with seismic crews:

- Seismic data acquisition activities in marine ocean bottom areas are subject to the risk of downtime or reduced productivity, as well as to the risks of loss to property and injury to personnel, mechanical failures and natural disasters. In addition to losses caused by human errors and accidents, we may also become subject to losses resulting from, among other things, political instability, business interruption, strikes and weather events; and
- OceanGeo's equipment and services may expose us to litigation and legal proceedings, including those related to product liability, personal injury and contract liability.

We will have in place insurance coverage against operating hazards, including product liability claims and personal injury claims, damage, destruction or business interruption related to OceanGeo's equipment and services, and whenever possible, OceanGeo will obtain agreements from customers that limit our liability. We also carry war, strikes, terrorism and related perils coverage for OceanGeo. However, we cannot assure you that the nature and amount of insurance will be sufficient to fully indemnify OceanGeo and us against liabilities arising from pending and future claims or that its insurance coverage will be adequate in all circumstances or against all hazards, and that we will be able to maintain adequate insurance coverage in the future at commercially reasonable rates or on acceptable terms.

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OceanGeo is also subject to, and exposes OceanGeo and us to, various additional risks that could adversely affect our results of operations and financial condition. These risks include the following:

- increased costs associated with the operation of the business and the management of geographically dispersed operations;
- OceanGeo's cash flows may be inadequate to fund its capital requirements, thereby requiring additional contributions to OceanGeo by us;
- risks associated with our new Calypso ocean bottom product that is intended to be utilized by OceanGeo in its operations, including risks that the new technology may not perform as well as we anticipate;
- difficulties in retaining and integrating key technical, sales and marketing personnel and the possible loss of such employees and costs associated with their loss;
- the diversion of management's attention and other resources from other business operations and related concerns;
- the requirement to maintain uniform standards, controls and procedures;
- we may not be able to realize operating efficiencies, cost savings or other benefits that we expect from OceanGeo's operations; and
- OceanGeo may experience difficulties and delays in securing new business and customer projects.

Our INOVA Geophysical joint venture with BGP involves numerous risks.

Our INOVA Geophysical joint venture with BGP is focused on designing, engineering, manufacturing, research and development, sales and marketing and field support of land-based equipment used in seismic data acquisition for the oil and gas industry. Excluded from the scope of the joint venture's business are the analog sensor businesses of our respective companies, and the businesses of certain companies in which BGP or we are currently a minority owner. The INOVA Geophysical joint venture involves the integration of multiple product lines and business models contributed by us and BGP that previously operated independently. This has proved to be a complex and time-consuming process.

Effective December 31, 2014, we have written our investment in INOVA Geophysical down to zero. In light of the write-down, we do not anticipate additional adverse financial impacts from the investment in INOVA Geophysical on our financial condition or results of operation. While we have written down our investment in INOVA Geophysical, we remain an owner of 49% of the equity in INOVA Geophysical. As an owner, we could be subject to capital calls in the future which, if not funded, could cause a dilution of our percentage interest in INOVA. We currently do not intend to participate in any future capital calls or provide future funding to INOVA. We may also experience difficulties exercising influence over the management and activities of the joint venture, quality control over joint venture products and services and potential conflicts of interest with the joint venture and with BGP, our joint venture partner. Also, we could be disadvantaged in the event of disputes and controversies with our joint venture partner, since our joint venture partner is a relatively significant customer of our services and products and future services and products of the joint venture as well as a holder of approximately 14% of our outstanding common stock.

The joint venture is also subject to, and exposes us to various risks including the following:

- increased costs associated with the integration and operation of the new business and the management of geographically dispersed operations;
- risks associated with the assimilation of new technologies, operations, sites and personnel;
- difficulties in retaining and integrating key technical, sales and marketing personnel and the possible loss of such employees and costs associated with their loss;
- difficulties associated with preserving relationships with our customers, partners and vendors;
- risks that any technology developed by the joint venture may not perform as well as we had anticipated;
- the strength of future seismic contractor demand for land seismic equipment and the highly competitive nature of the land seismic equipment manufacturing industry;
- the diversion of management's attention and other resources from other business operations and related concerns;
- the potential inability to replicate operating efficiencies in the joint venture's operations;
- the requirement to maintain uniform standards, controls and procedures;
- the impairment of relationships with employees and customers as a result of the integration of management personnel from different companies;

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- the divergence of our interests from BGP's interests in the future, disagreements with BGP on ongoing manufacturing, research and development and operational activities, or the amount, timing or nature of further investments in the joint venture;
- the terms of our joint venture arrangements may turn out to be unfavorable to us;
- because we currently own only 49% of the total equity interests in INOVA Geophysical, there are certain decisions affecting the business of the joint venture that we cannot control or influence;
- we may not be able to realize the operating efficiencies, cost savings or other benefits that we expect from the joint venture;
- joint venture profits and cash flows may prove inadequate to fund cash dividends or other distributions from the joint venture to the joint venture partners; and
- the joint venture may experience difficulties and delays in production of the joint venture's products.

In addition, the terms of the joint venture's governing instruments and the agreements regarding BGP's investment in our company contain a number of restrictive provisions that directly affect us. For example, an investors' rights agreement grants pre-emptive rights to BGP with respect to certain future issuances of our stock. These restrictions may adversely affect our ability to quickly raise funds through a future issuance of our securities, and could have the effect of discouraging, delaying or preventing a merger or acquisition of our company that our stockholders may otherwise consider to be favorable. See " — Our certificate of incorporation and bylaws, Delaware law and certain contractual obligations under our agreement with BGP contain provisions that could discourage another company from acquiring us" below.

Our indebtedness could adversely affect our liquidity, financial condition and our ability to fulfill our obligations and operate our business.

As of December 31, 2014, we had approximately $190.6 million of total outstanding indebtedness, including $15.1 million of capital leases. As of December 31, 2014, there was no outstanding indebtedness under our New Credit Facility. Under our New Credit Facility, the lenders have currently committed $80.0 million of revolving credit, subject to a borrowing base. As of December 31, 2014, we have approximately $68.2 million available under the New Credit Facility. The amount available will increase or decrease monthly as our borrowing base changes. We may also incur additional indebtedness in the future. If we are required to post collateral for an appeal bond with a surety during the appeal process, depending on the size of the bond and the level of required collateral, in order to collateralize the bond we might need to utilize a combination of cash on hand an undrawn sums available for borrowing under our New Credit Facility, and possibly incur additional debt financing. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing below in this Form 10-K.

In November 2014, Standard and Poor's ("S&P") downgraded our company's corporate and debt ratings. According to S&P, this downgrade reflects S&P's expectation that our company will face unclear market conditions as a result of the decrease in crude oil and U.S. natural gas prices. Both S&P and Moody's Investor Services continue to hold a negative outlook on our company due to the weak seismic sector fundamentals and concerns around maintaining sufficient liquidity to fund contingent liabilities.

Higher levels of indebtedness could have negative consequences to us, including:

- we may have difficulty satisfying our obligations with respect to our outstanding debt;
- we may have difficulty obtaining financing in the future for working capital, capital expenditures, acquisitions or other purposes;
- we may need to use all, or a substantial portion, of our available cash flow to pay interest and principal on our debt, which will reduce the amount of money available to finance our operations and other business activities;
- our vulnerability to general economic downturns and adverse industry conditions could increase;
- our flexibility in planning for, or reacting to, changes in our business and in our industry in general could be limited;
- our amount of debt and the amount we must pay to service our debt obligations could place us at a competitive disadvantage compared to our competitors that have less debt;
- our customers may react adversely to our significant debt level and seek or develop alternative licensors or suppliers;
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we may have insufficient funds, and our debt level may also restrict us from raising the funds necessary to repurchase all of the Notes (defined below) tendered to us upon the occurrence of a change of control, which would constitute an event of default under the Notes; and

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- our failure to comply with the restrictive covenants in our debt instruments which, among other things, limit our ability to incur debt and sell assets, could result in an event of default that, if not cured or waived, could have a material adverse effect on our business or prospects.

Our level of indebtedness will require that we use a substantial portion of our cash flow from operations to pay principal of, and interest on, our indebtedness, which will reduce the availability of cash to fund working capital requirements, capital expenditures, research and development and other general corporate or business activities.

The indenture governing the 8.125% Senior Secured Second-Priority Notes due 2018 (the "Notes") contains a number of restrictive covenants that limit our ability to finance future operations or capital needs or engage in other business activities that may be in our interest.

The indenture governing the Notes imposes, and the terms of any future indebtedness may impose, operating and other restrictions on us and our subsidiaries. Such restrictions affect or will affect, and in many respects limit or prohibit, among other things, our ability and the ability of certain of our subsidiaries to:

- incur additional indebtedness;
- create liens;
- pay dividends and make other distributions in respect of our capital stock;
- redeem our capital stock;
- make investments or certain other restricted payments;
- sell certain kinds of assets;
- enter into transactions with affiliates; and
- effect mergers or consolidations.

The restrictions contained in the indenture governing the Notes could:

- limit our ability to plan for or react to market or economic conditions or meet capital needs or otherwise restrict our activities or business plans; and
- adversely affect our ability to finance our operations, acquisitions, investments or strategic alliances or other capital needs or to engage in other business activities that would be in our interest.

A breach of any of these covenants could result in a default under the indenture governing the Notes. If an event of default occurs, the trustee and holders of the Notes could elect to declare all borrowings outstanding, together with accrued and unpaid interest, to be immediately due and payable. An event of default under the indenture governing the Notes would also constitute an event of default under our New Credit Facility. See Footnote 6 "Long-term Debt and Lease Obligations" of the Footnotes to Consolidated Financial Statements appearing below in this Form 10-K.

As a technology-focused company, we are continually exposed to risks related to complex, highly technical services and products.

We have made, and we will continue to make, strategic decisions from time to time as to the technologies in which we invest. If we choose the wrong technology, our financial results could be adversely impacted. Our operating results are dependent upon our ability to improve and refine our seismic imaging and data processing services and to successfully develop, manufacture and market our products and other services and products. New technologies generally require a substantial investment before any assurance is available as to their commercial viability. If we choose the wrong technology, or if our competitors develop or select a superior technology, we could lose our existing customers and be unable to attract new customers, which would harm our business and operations.

New data acquisition or processing technologies may be developed. New and enhanced services and products introduced by one of our competitors may gain market acceptance and, if not available to us, may adversely affect us.

The markets for our services and products are characterized by changing technology and new product introductions. We must invest substantial capital to develop and maintain a leading edge in technology, with no assurance that we will receive an adequate rate of return on those investments. If we are unable to develop and produce successfully and timely new or enhanced services and products, we will be unable to compete in the future and our business, our results of operations and our financial condition will be materially and adversely affected. Our business could suffer from unexpected developments in technology, or from our failure to adapt to these changes. In addition, the preferences and requirements of customers can change rapidly.

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The businesses of our Solutions and Software segments, being more concentrated in software, processing services and proprietary technologies, have also exposed us to various risks that these technologies typically encounter, including the following:

- future competition from more established companies entering the market;
- technology obsolescence;
- dependence upon continued growth of the market for seismic data processing;
- the rate of change in the markets for these segments' technology and services;
- research and development efforts not proving sufficient to keep up with changing market demands;
- dependence on third-party software for inclusion in these segments' services and products;
- misappropriation of these segments' technology by other companies;
- alleged or actual infringement of intellectual property rights that could result in substantial additional costs;
- difficulties inherent in forecasting sales for newly developed technologies or advancements in technologies;
- recruiting, training and retaining technically skilled, experienced personnel that could increase the costs for these segments, or limit their growth; and
- the ability to maintain traditional margins for certain of their technology or services.

Seismic data acquisition and data processing technologies historically have progressed rather rapidly, and we expect this progression to continue. In order to remain competitive, we must continue to invest additional capital to maintain, upgrade and expand our seismic data acquisition and processing capabilities. However, due to potential advances in technology and the related costs associated with such technological advances, we may not be able to fulfill this strategy, thus possibly affecting our ability to compete.

Our customers often require demanding specifications for performance and reliability of our services and products. Because many of our products are complex and often use unique advanced components, processes, technologies and techniques, undetected errors and design and manufacturing flaws may occur. Even though we attempt to assure that our systems are always reliable in the field, the many technical variables related to their operations can cause a combination of factors that can, and have from time to time, caused performance and service issues with certain of our products. Product defects result in higher product service, warranty and replacement costs and may affect our customer relationships and industry reputation, all of which may adversely impact our results of operations. Despite our testing and quality assurance programs, undetected errors may not be discovered until the product is purchased and used by a customer in a variety of field conditions. If our customers deploy our new products and they do not work correctly, our relationship with our customers may be materially and adversely affected.

As a result of our systems' advanced and complex nature, we expect to experience occasional operational issues from time to time. Generally, until our products have been tested in the field under a wide variety of operational conditions, we cannot be certain that performance and service problems will not arise. In that case, market acceptance of our new products could be delayed and our results of operations and financial condition could be adversely affected.

We have invested, and expect to continue to invest, significant sums of money in acquiring and processing seismic data for our Solutions' multi-client data library, without knowing precisely how much of this seismic data we will be able to license or when and at what price we will be able to license the data sets. Our business could be adversely affected by the failure of our customers to fulfill their obligations to reimburse us for the underwritten portion of our seismic data acquisition costs for our multi-client library.

We invest significant amounts in acquiring and processing new seismic data to add to our Solutions' multi-client data library. The costs of most of these investments are funded by our customers, with the remainder generally being recovered through future data licensing fees. In 2014, we invested approximately $67.8 million in our multi-client data library. Our customers generally commit to licensing the data prior to our initiating a new data library acquisition program. However, the aggregate amounts of future licensing fees for this data are uncertain and depend on a variety of factors, including the market prices of oil and gas, customer demand for seismic data in the library, and the availability of similar data from competitors.

By making these investments in acquiring and processing new seismic data for our Solutions' multi-client library, we are exposed to the following risks:

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We may not fully recover our costs of acquiring and processing seismic data through future sales. The ultimate amounts involved in these data sales are uncertain and depend on a variety of factors, many of which are beyond our control.

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- The timing of these sales is unpredictable and can vary greatly from period to period. The costs of each survey are capitalized and then amortized as a percentage of sales and/or over the expected useful life of the data. This amortization will affect our earnings and, when combined with the sporadic nature of sales, will result in increased earnings volatility.

Regulatory changes that affect companies' ability to drill, either generally or in a specific location where we have acquired seismic data, could materially adversely affect the value of the seismic data contained in our library.

- Technology changes could also make existing data sets obsolete. Additionally, each of our individual surveys has a limited book life based on its location and oil and gas companies' interest in prospecting for reserves in such location, so a particular survey may be subject to a significant decline in value beyond our initial estimates.
- The value of our multi-client data could be significantly adversely affected if any material adverse change occurs in the general prospects for oil and gas exploration, development and production activities.
- The cost estimates upon which we base our pre-commitments of funding could be wrong. The result could be losses that have a material adverse effect on our financial condition and results of operations. These pre-commitments of funding are subject to the creditworthiness of our clients. In the event that a client refuses or is unable to pay its commitment, we could incur a substantial loss on that project.
- As part of our asset-light strategy, we routinely charter vessels from third-party vendors to acquire seismic data for our multi-client business. As a result, our cost to acquire our multi-client data could significantly increase if vessel charter prices rise materially.

Reductions in demand for our seismic data, or lower revenues of or cash flows from our seismic data, may result in a requirement to increase amortization rates or record impairment charges in order to reduce the carrying value of our data library. These increases or charges, if required, could be material to our operating results for the periods in which they are recorded.

A substantial portion (approximately 73% in 2014) of our seismic acquisition project costs (including third-party project costs) are underwritten by our customers. In the event that underwriters for such projects fail to fulfill their obligations with respect to such underwriting commitments, we would continue to be obligated to satisfy our payment obligations to third-party contractors.

We derive a substantial amount of our revenues from foreign operations and sales, which pose additional risks.

The majority of our foreign sales are denominated in U.S. dollars. Sales to customer destinations outside of North America represented 74%, 73% and 69% of our consolidated net revenues for 2014, 2013 and 2012, respectively, of our consolidated net revenues. We believe that export sales will remain a significant percentage of our revenue. U.S. export restrictions affect the types and specifications of products we can export. Additionally, in order to complete certain sales, U.S. laws may require us to obtain export licenses, and we cannot assure you that we will not experience difficulty in obtaining these licenses.

Like many energy services companies, we have operations in and sales into certain international areas, including parts of the Middle East, West Africa, Latin America, Asia Pacific and the former Soviet Union, that are subject to risks of war, political disruption, civil disturbance, political corruption, possible economic and legal sanctions (such as possible restrictions against countries that the U.S. government may consider to be state sponsors of terrorism) and changes in global trade policies. Our sales or operations may become restricted or prohibited in any country in which the foregoing risks occur. In particular, the occurrence of any of these risks could result in the following events, which in turn, could materially and adversely impact our results of operations:

- disruption of E&P activities;
- restriction on the movement and exchange of funds;
- inhibition of our ability to collect advances and receivables;
- enactment of additional or stricter U.S. government or international sanctions;
- limitation of our access to markets for periods of time;
- expropriation and nationalization of assets of our company or those of our customers;
- political and economic instability, which may include armed conflict and civil disturbance;
- currency fluctuations, devaluations and conversion restrictions;
- confiscatory taxation or other adverse tax policies; and

- governmental actions that may result in the deprivation of our contractual rights.

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Our international operations and sales increase our exposure to other countries' restrictive tariff regulations, other import/export restrictions and customer credit risk.

In addition, we are subject to taxation in many jurisdictions and the final determination of our tax liabilities involves the interpretation of the statutes and requirements of taxing authorities worldwide. Our tax returns are subject to routine examination by taxing authorities, and these examinations may result in assessments of additional taxes, penalties and/or interest.

We may be unable to obtain broad intellectual property protection for our current and future products and we may become involved in intellectual property disputes; we rely on developing and acquiring proprietary data which we keep confidential.

We rely on a combination of patent, copyright and trademark laws, trade secrets, confidentiality procedures and contractual provisions to protect our proprietary technologies. We believe that the technological and creative skill of our employees, new product developments, frequent product enhancements, name recognition and reliable product maintenance are the foundations of our competitive advantage. Although we have a considerable portfolio of patents, copyrights and trademarks, these property rights offer us only limited protection. Our competitors may attempt to copy aspects of our products despite our efforts to protect our proprietary rights, or may design around the proprietary features of our products. Policing unauthorized use of our proprietary rights is difficult, and we are unable to determine the extent to which such use occurs. Our difficulties are compounded in certain foreign countries where the laws do not offer as much protection for proprietary rights as the laws of the United States.

Third parties inquire and claim from time to time that we have infringed upon their intellectual property rights. Many of our competitors own their own extensive global portfolio of patents, copyrights, trademarks, trade secrets and other intellectual property to protect their proprietary technologies. We believe that we have in place appropriate procedures and safeguards to help ensure that we do not violate a third party's intellectual property rights. However, no set of procedures and safeguards is infallible. We may unknowingly and inadvertently take action that is inconsistent with a third party's intellectual property rights, despite our efforts to do otherwise. Any such claims from third parties, with or without merit, could be time consuming, result in costly litigation, result in injunctions, require product modifications, cause product shipment delays or require us to enter into royalty or licensing arrangements. Such claims could have a material adverse effect on our results of operations and financial condition.

Much of our litigation in recent years have involved disputes over our and others' rights to technology. See Item 3. "Legal Proceedings."

To protect the confidentiality of our proprietary and trade secret information, we require employees, consultants, contractors, advisors and collaborators to enter into confidentiality agreements. Our customer data license and acquisition agreements also identify our proprietary, confidential information and require that such proprietary information be kept confidential. While these steps are taken to strictly maintain the confidentiality of our proprietary and trade secret information, it is difficult to ensure that unauthorized use, misappropriation or disclosure will not occur. If we are unable to maintain the secrecy of our proprietary, confidential information, we could be materially adversely affected.

If we do not effectively manage our transition into new services and products, our revenues may suffer.

Services and products for the geophysical industry are characterized by rapid technological advances in hardware performance, software functionality and features, frequent introduction of new services and products, and improvement in price characteristics relative to product and service performance. Among the risks associated with the introduction of new services and products are delays in development or manufacturing, variations in costs, delays in customer purchases or reductions in price of existing products in anticipation of new introductions, write-offs or write-downs of the carrying costs of inventory and raw materials associated with prior generation products, difficulty in predicting customer demand for new product and service offerings and effectively managing inventory levels so that they are in line with anticipated demand, risks associated with customer qualification, evaluation of new products, and the risk that new products may have quality or other defects or may not be supported adequately by application software. The introduction of new services and products by our competitors also may result in delays in customer purchases and difficulty in predicting customer demand. If we do not make an effective transition from existing services and products to future offerings, our revenues and margins may decline.

Furthermore, sales of our new services and products may replace sales, or result in discounting of some of our current product or service offerings, offsetting the benefits of a successful introduction. In addition, it may be difficult to ensure performance of new services and products in accordance with our revenue, margin and cost estimations and to achieve operational efficiencies embedded in our estimates. Given the competitive nature of the seismic industry, if any of these risks materializes, future demand for our services and products, and our future results of operations, may suffer.

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Global economic conditions and credit market uncertainties could have an adverse effect on customer demand for certain of our services and products, which in turn would adversely affect our results of operations, our cash flows, our financial condition and our stock price.

Historically, demand for our services and products has been sensitive to the level of exploration spending by E&P companies and geophysical contractors. The demand for our services and products will be lessened if exploration expenditures by E&P companies are reduced. During periods of reduced levels of exploration for oil and natural gas, there have been oversupplies of seismic data and downward pricing pressures on our seismic services and products, which, in turn, have limited our ability to meet sales objectives and maintain profit margins for our services and products. In the past, these then-prevailing industry conditions have had the effect of reducing our revenues and operating margins. The markets for oil and gas historically have been volatile and may continue to be so in the future.

Turmoil or uncertainty in the credit markets and its potential impact on the liquidity of major financial institutions may have an adverse effect on our ability to fund our business strategy through borrowings under either existing or new debt facilities in the public or private markets and on terms we believe to be reasonable. Likewise, there can be no assurance that our customers will be able to borrow money for their working capital or capital expenditures on a timely basis or on reasonable terms, which could have a negative impact on their demand for our services and products and impair their ability to pay us for our services and products on a timely basis, or at all.

Our sales have historically been affected by interest rate fluctuations and the availability of liquidity, and we and our customers would be adversely affected by increases in interest rates or liquidity constraints. Rising interest rates may also make certain alternative services and products provided by our competitors more attractive to customers, which could lead to a decline in demand for our services and products. This could have a material adverse effect on our business, results of operations, financial condition and cash flows.

The loss of any significant customer could materially and adversely affect our results of operations and financial condition.

Our business is exposed to risks related to customer concentration. While no single customer represented 10% or more of our consolidated net revenues for 2014, 2013 and 2012, our top five customers together accounted for approximately 35%, 29% and 28%, respectively, of our consolidated net revenues during those years. The loss of any of our significant customers or deterioration in our relations with any of them could materially and adversely affect our results of operations and financial condition.

During the last ten years, our traditional seismic contractor customers have been rapidly consolidating, thereby consolidating the demand for our services and products. In 2013, CGG acquired Fugro’s geoscience division. This acquisition evidences the further consolidation ongoing in this market, and could have the effect of reducing the number of our potential customers and vessel outfitting opportunities. The loss of any of our significant customers to further consolidation could materially and adversely affect our results of operations and financial condition.

Our stock price has been volatile from time to time, declining precipitously from time to time during the period from 2008 through the present, and it could decline again.

The securities markets in general and our common stock in particular have experienced significant price and volume volatility in recent years. The market price and trading volume of our common stock may continue to experience significant fluctuations due not only to general stock market conditions but also to a change in sentiment in the market regarding our operations or business prospects or those of companies in our industry. In addition to the other risk factors discussed in this section, the price and volume volatility of our common stock may be affected by:

- operating results that vary from the expectations of securities analysts and investors;
- factors influencing the levels of global oil and natural gas exploration and exploitation activities, such as depressed prices for natural gas in North America or disasters such as the Deepwater Horizon incident in the Gulf of Mexico in 2010;
- the operating and securities price performance of companies that investors or analysts consider comparable to us;
- actions by rating agencies related to the Notes;
- announcements of strategic developments, acquisitions and other material events by us or our competitors; and
- changes in global financial markets and global economies and general market conditions, such as interest rates, commodity and equity prices and the value of financial assets.

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To the extent that the price of our common stock remains at lower levels or it declines further, our ability to raise funds through the issuance of equity or otherwise use our common stock as consideration will be reduced. In addition, further borrowings by us may make it more difficult for us to access additional capital. These factors may limit our ability to implement our operating and growth plans.

Goodwill and intangible assets that we have recorded are subject to impairment evaluations and, as a result, we could be required to write-off additional goodwill and intangible assets. In addition, portions of our products inventory may become obsolete or excessive due to future changes in technology, changes in market demand, or changes in market expectations. Write-downs of these assets may adversely affect our financial condition and results of operations.

In accordance with Accounting Standard Codification ("ASC") 350, "Intangibles – Goodwill and Other" ("ASC 350"), we are required to compare the fair value of our goodwill and intangible assets (when certain impairment indicators under ASC 350 are present) to their carrying amount. If the fair value of such goodwill or intangible assets is less than its carrying value, an impairment loss is recorded to the extent that the fair value of these assets within the reporting units is less than their carrying value.

For goodwill testing purposes, the $123.8 million litigation contingency accrual is assigned to the Marine Systems reporting unit. Based on this accrual and the recording of a valuation allowance on substantially all of our net deferred tax assets, this reporting unit's carrying value was negative as of December 31, 2014. The negative carrying value required us to perform step 2 of the impairment test on Marine Systems; the test determined that the goodwill associated with the Marine Systems reporting unit was impaired. In connection with the preparation of the financial statements included in this Annual Report on Form 10-K, we recorded a charge of $21.9 million to impair that goodwill. We also recorded a $1.4 million impairment of certain intangible assets related to customer relationship within our Solutions segment at December 31, 2014.

Further reductions in or an impairment of the value of our goodwill or other intangible assets will result in additional charges against our earnings, which could have a material adverse effect on our reported results of operations and financial position in future periods. At December 31, 2014, our remaining goodwill and other intangible asset balances were $27.4 million and $6.8 million, respectively.

Our services and products' technologies often change relatively quickly. Phasing out of old products involves estimating the amounts of inventories we need to hold to satisfy demand for those products and satisfy future repair part needs. Based on changing technologies and customer demand, we may find that we have either obsolete or excess inventory on hand. Because of unforeseen future changes in technology, market demand or competition, we might have to write off unusable inventory, which would adversely affect our results of operations. In connection with the preparation of the financial statements included in this Annual Report on Form 10-K, for the year ended December 31, 2014, we increased our reserve for excess and obsolete inventories by $7.0 million related to write-downs of inventory.

Due to the international scope of our business activities, our results of operations may be significantly affected by currency fluctuations.

We derive approximately 74% of our consolidated net revenues from international sales, subjecting us to risks relating to fluctuations in currency exchange rates. Currency variations can adversely affect margins on sales of our products in countries outside of the United States and margins on sales of products that include components obtained from suppliers located outside of the United States. Through our subsidiaries, we operate in a wide variety of jurisdictions, including the United Kingdom, Australia, the Netherlands, Brazil, China, Canada, Russia, the United Arab Emirates, Egypt and other countries. Certain of these countries have experienced geopolitical instability, economic problems and other uncertainties from time to time. To the extent that world events or economic conditions negatively affect our future sales to customers in these and other regions of the world, or the collectability of receivables, our future results of operations, liquidity and financial condition may be adversely affected. In the fourth quarter of 2014, the decline in crude oil prices, as well as U.S. and European Union sanctions against Russia related to Russia's actions in Ukraine, have both contributed to the devaluation of the Russian ruble putting significant pressure on our Russian-based customers and negatively impacting the appeal of seismic data located in Russia to potential non-Russian buyers. Our results of operations, liquidity and financial condition related to our operations in Russia are primarily denominated in U.S. dollars.

We currently require customers in certain higher risk countries to provide their own financing. We do not currently extend long-term credit through notes to companies in countries where we perceive excessive credit risk.

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A majority of our foreign net working capital is within the United Kingdom. Our consolidated balance sheet at December 31, 2014 reflected approximately $15.3 million of net working capital related to our foreign subsidiaries, a majority of which is within the United Kingdom. Our subsidiaries in the U.K. and in other countries receive their income and pay their expenses primarily in their local currencies. To the extent that transactions of these subsidiaries are settled in their local currencies, a devaluation of those currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars. For financial reporting purposes, such depreciation will negatively affect our reported results of operations since earnings denominated in foreign currencies would be converted to U.S. dollars at a decreased value. In addition, since we participate in competitive bids for sales of certain of our services and products that are denominated in U.S. dollars, a depreciation of the U.S. dollar against other currencies could harm our competitive position relative to other companies. While we periodically employ economic cash flow and fair value hedges to minimize the risks associated with these exchange rate fluctuations, the hedging activities may be ineffective or may not offset more than a portion of the adverse financial impact resulting from currency variations. Accordingly, we cannot assure you that fluctuations in the values of the currencies of countries in which we operate will not materially adversely affect our future results of operations.

We rely on highly skilled personnel in our businesses, and if we are unable to retain or motivate key personnel or hire qualified personnel, we may not be able to grow effectively.

Our performance is largely dependent on the talents and efforts of highly skilled individuals. Our future success depends on our continuing ability to identify, hire, develop, motivate and retain skilled personnel for all areas of our organization. We require highly skilled personnel to operate and provide technical services and support for our businesses. Competition for qualified personnel required for our data processing operations and our other segments' businesses has intensified in recent years. Our growth has presented challenges to us to recruit, train and retain our employees while managing the impact of potential wage inflation and the lack of available qualified labor in some markets where we operate. A well-trained, motivated and adequately-staffed work force has a positive impact on our ability to attract and retain business. Our continued ability to compete effectively depends on our ability to attract new employees and to retain and motivate our existing employees.

However, from time to time, we have to rightsize our work force due to economic and market conditions. In the fourth quarter we initiated restructurings across all our segments, except for our Ocean Bottom Services segment, reducing our overall workforce by approximately 10%. See Part II. Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Executive Summary – Restructuring and Other Charges" for a discussion of the restructuring in the fourth quarter of 2014.

If we, our option holders or stockholders holding registration rights sell additional shares of our common stock in the future, the market price of our common stock could decline. The exercise of our stock options could result in substantial dilution to our existing stockholders. Sales in the open market of the shares of common stock acquired upon such exercises may have the effect of reducing the then current market price for our common stock.

The market price of our common stock could decline as a result of sales of a large number of shares of our common stock in the market in the future, or the perception that such sales could occur. These sales, or the possibility that these sales may occur, could make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. As of January 30, 2015, we had 164,484,095 shares of common stock issued and outstanding. Substantially all of these shares are available for sale in the public market, subject in some cases to volume and other limitations or delivery of a prospectus. At January 30, 2015, we had outstanding stock options to purchase up to 8,980,525 shares of our common stock at a weighted average exercise price of $6.30 per share. We also had, as of that date, 995,777 shares of common stock reserved for issuance under outstanding restricted stock and restricted stock unit awards.

During 2009, we issued in a privately-negotiated transaction 18.5 million shares of our common stock to certain institutional investors. In March 2010, we issued 23.8 million shares to BGP in a privately-negotiated transaction in connection with the formation of our INOVA Geophysical joint venture. These shares may be resold into the public markets in sale transactions pursuant to currently-effective registration statements filed with the SEC or pursuant to another exemption from registration. Sales in the public market of a large number of shares of common stock (or the

perception that such sales could occur) could apply downward pressure on the prevailing market price of our common stock.

Shares of our common stock are also subject to certain demand and piggyback registration rights held by Laitram, L.L.C., an affiliate of one of our directors. We also may enter into additional registration rights agreements in the future in connection with any subsequent acquisitions or securities transactions we may undertake. Any sales of our common stock under these registration rights arrangements with Laitram or other stockholders could be negatively perceived in the trading markets and negatively affect the price of our common stock. Sales of a substantial number of our shares of common stock in the public market under these arrangements, or the expectation of such sales, could cause the market price of our common stock to decline.

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Certain of our facilities could be damaged by hurricanes and other natural disasters, which could have an adverse effect on our results of operations and financial condition.

Certain of our facilities are located in regions of the United States that are susceptible to damage from hurricanes and other weather events, and, during 2005, were impacted by hurricanes or other weather events. Our Systems segment leases 150,000 square feet of facilities located in Harahan, Louisiana, in the greater New Orleans metropolitan area. In late August 2005, we suspended operations at these facilities and evacuated and locked down the facilities in preparation for Hurricane Katrina. These facilities did not experience flooding or significant damage during or after the hurricane. However, because of employee evacuations, power failures and lack of related support services, utilities and infrastructure in the New Orleans area, we were unable to resume full operations at the facilities until late September 2005. In September 2008, we lost power and related services for several days at our offices located in the Houston metropolitan area, which includes a substantial portion of our data processing infrastructure, and in Harahan, Louisiana as a result of Hurricane Ike and Hurricane Gustav.

Future hurricanes or similar natural disasters that impact our facilities may negatively affect our financial position and operating results for those periods. These negative effects may include reduced production, product sales and data processing revenues; costs associated with resuming production; reduced orders for our services and products from customers that were similarly affected by these events; lost market share; late deliveries; additional costs to purchase materials and supplies from outside suppliers; uninsured property losses; inadequate business interruption insurance and an inability to retain necessary staff. To the extent that climate change increases the severity of hurricanes and other weather events, as some have suggested, it could worsen the severity of these negative effects on our financial position and operating results.

Our operations, and the operations of our customers, are subject to numerous government regulations, which could adversely limit our operating flexibility. Regulatory initiatives undertaken from time to time, such as restrictions, sanctions and embargoes, can adversely affect, and have has adversely affected, our customers and our business.

In addition to the specific regulatory risks discussed elsewhere in this Item 1A. “Risk Factors” section, our operations are subject to other laws, regulations, government policies and product certification requirements worldwide. Changes in such laws, regulations, policies or requirements could affect the demand for our products or services or result in the need to modify our services and products, which may involve substantial costs or delays in sales and could have an adverse effect on our future operating results. Our export activities are also subject to extensive and evolving trade regulations. Certain countries are subject to restrictions, sanctions and embargoes imposed by the United States government; most recently Russia. These restrictions, sanctions and embargoes also prohibit or limit us from participating in certain business activities in those countries. Our operations are subject to numerous local, state and federal laws and regulations in the United States and in foreign jurisdictions concerning the containment and disposal of hazardous materials, the remediation of contaminated properties, and the protection of the environment. These laws have been changed frequently in the past, and there can be no assurance that future changes will not have a material adverse effect on us. In addition, our customers’ operations are also significantly impacted by laws and regulations concerning the protection of the environment and endangered species. Consequently, changes in governmental regulations applicable to our customers may reduce demand for our services and products. To the extent that our customers’ operations are disrupted by future laws and regulations, our business and results of operations may be materially and adversely affected.

Future changes in laws or regulations regarding offshore oil and gas exploration and development activities and decisions by customers, governmental agencies, or other industry participants in response to these changes, could reduce demand for our services and products, which could have a negative impact on our financial position, results of operations or cash flows. We cannot reasonably or reliably estimate that such changes will occur, when they will occur, or whether they will impact us. Such changes can occur quickly within a region, which may impact both the affected region and global exploration and production, and we may not be able to respond quickly, or at all, to mitigate these changes. In addition, these future laws and regulations could result in increased compliance costs or additional operating restrictions that may adversely affect the financial health of our customers and decrease the demand for our services and products.

Climate change regulations or legislation could result in increased operating costs and reduced demand for the oil and gas our clients intend to produce.

In response to concerns suggesting that emissions of and greenhouse gases (including carbon dioxide and methane) ("GHGs") may be contributing to global climate change, legislative and regulatory measures to address the concerns are in various phases of discussion or implementation. We are aware of the increasing focus of local, state, national and international regulatory bodies on GHG emissions and climate change issues. The United States Congress may consider legislation to reduce GHG emissions. Although it is not possible at this time to predict whether proposed legislation or regulations will be adopted, any such future laws and regulations could result in increased compliance costs or additional operating restrictions. Any additional costs or operating restrictions associated with legislation or regulations regarding GHG emissions could have a material adverse impact on our business, financial condition and results of operations.

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At least one-third of the states, either individually or through multi-state regional initiatives, have already taken legal measures intended to reduce GHG emissions, primarily through the planned development of GHG emission inventories and/or GHG cap and trade programs. More stringent regulations and laws relating to GHGs and climate change may be adopted in the future and could reduce the demand for our services and products. Reductions in our revenues or increases in our expenses as a result of climate control initiatives could have adverse effects on our business, financial position, results of operations and prospects. Additionally, any new emissions or other environmental regulations imposed on off-shore vessels could cause the prices of vessels to increase, cause unexpected downtime or affect availability.

Increased regulation of hydraulic fracturing could result in reductions or delays in drilling and completing new oil and natural gas wells, which could adversely impact our revenues by decreasing the demand for our data libraries and seismic acquisition services.

Hydraulic fracturing is a process used by oil and gas E&P operators in the completion of certain oil and gas wells, particularly in low permeability formations such as shales. The process involves the injection of water, sand, other proppants and chemicals under pressure into the target reservoir to stimulate hydrocarbon production. Our business is highly dependent on the level of activity by our oil and gas E&P customers, and hydrocarbons cannot be economically produced from certain reservoirs without extensive hydraulic fracturing.

Due to public concerns about environmental impact that hydraulic fracturing may have, including potential impairment of groundwater quality, legislative and regulatory efforts at the federal, state and local levels have been initiated to impose more stringent permitting and compliance obligations on these operations. Several states have implemented, or are considering implementing, new regulations pertaining to hydraulic fracturing, including the disclosure of chemicals used in fracturing operations. A number of state and local governments have also adopted or are considering adopting additional requirements relating to hydraulic fracturing. In certain areas of the country, new drilling permits for hydraulic fracturing have been put on hold pending the completion of studies and development of additional standards.

Further governmental reviews are underway or being proposed that focus on environmental aspects of hydraulic fracturing practices. The White House Council on Environmental Quality is coordinating an administration-wide review of hydraulic fracturing practices, and a committee of the U.S. House of Representatives has conducted an investigation of hydraulic fracturing practices. The EPA has commenced a study of the potential environmental effects of hydraulic fracturing on drinking water and groundwater, with final results expected to be released in early 2015. The adoption of legislation or regulations placing significant restrictions on hydraulic fracturing activities could impose operational delays and increased operating costs on our customers, making it more difficult and costly for them to complete natural gas and oil wells. In the event such requirements are enacted, demand for our shale data libraries and seismic data acquisition services and products may be adversely affected.

We have outsourcing arrangements with third parties to manufacture some of our products. If these third party suppliers fail to deliver quality products or components at reasonable prices on a timely basis, we may alienate some of our customers and our revenues, profitability and cash flow may decline. Additionally, current global economic conditions could have a negative impact on our suppliers, causing a disruption in our vendor supplies. A disruption in vendor supplies may adversely affect our results of operations.

Our manufacturing processes require a high volume of quality components. We have increased our use of contract manufacturers as an alternative to our own manufacturing of products. We have outsourced the manufacturing of our towed marine streamers and MEMS components. Certain components used by us are currently provided by only one supplier. If, in implementing any outsource initiative, we are unable to identify contract manufacturers willing to contract with us on competitive terms and to devote adequate resources to fulfill their obligations to us or if we do not properly manage these relationships, our existing customer relationships may suffer. In addition, by undertaking these activities, we run the risk that the reputation and competitiveness of our services and products may deteriorate as a result of the reduction of our control over quality and delivery schedules. We also may experience supply interruptions, cost escalations and competitive disadvantages if our contract manufacturers fail to develop, implement, or maintain manufacturing methods appropriate for our products and customers.

Reliance on certain suppliers, as well as industry supply conditions, generally involves several risks, including the possibility of a shortage or a lack of availability of key components, increases in component costs and reduced control over delivery schedules. If any of these risks are realized, our revenues, profitability and cash flows may decline. In addition, as we come to rely more heavily on contract manufacturers, we may have fewer personnel resources with expertise to manage problems that may arise from these third-party arrangements.

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Additionally, our suppliers could be negatively impacted by current global economic conditions. If certain of our suppliers were to experience significant cash flow issues or become insolvent as a result of such conditions, it could result in a reduction or interruption in supplies to us or a significant increase in the price of such supplies and adversely impact our results of operations and cash flows.

Under some of our outsourcing arrangements, our manufacturing outsourcers purchase agreed-upon inventory levels to meet our forecasted demand. Our manufacturing plans and inventory levels are generally based on sales forecasts. If demand proves to be less than we originally forecasted and we cancel our committed purchase orders, our outsourcers generally will have the right to require us to purchase inventory which they had purchased on our behalf. Should we be required to purchase inventory under these terms, we may be required to hold inventory that we may never utilize.

Our business is subject to cybersecurity risks and threats.

Threats to our information technology systems associated with cybersecurity risk and cyber incidents or attacks continue to grow. It is also possible that breaches to our systems could go unnoticed for some period of time. Risks associated with these threats include, among other things, loss of intellectual property, impairment of our ability to conduct our operations, disruption of our customers' operations, loss or damage to our customer data delivery systems, and increased costs to prevent, respond to or mitigate cybersecurity events.

Our certificate of incorporation and bylaws, Delaware law and certain contractual obligations under our agreement with BGP contain provisions that could discourage another company from acquiring us.

Provisions of our certificate of incorporation and bylaws, Delaware law and the terms of our investor rights agreement with BGP may have the effect of discouraging, delaying or preventing a merger or acquisition that our stockholders may consider favorable, including transactions in which you might otherwise receive a premium for shares of our common stock. These provisions include:

- authorizing the issuance of "blank check" preferred stock without any need for action by stockholders;
- providing for a classified board of directors with staggered terms;
- requiring supermajority stockholder voting to effect certain amendments to our certificate of incorporation and bylaws;
- eliminating the ability of stockholders to call special meetings of stockholders;
- prohibiting stockholder action by written consent; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

In addition, the terms of our INOVA Geophysical joint venture with BGP and BGP's investment in our company contain a number of provisions, such as certain pre-emptive rights granted to BGP with respect to certain future issuances of our stock, that could have the effect of discouraging, delaying or preventing a merger or acquisition of our company that our stockholders may otherwise consider to be favorable.

Failure to maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our stock price.

If, in the future, we fail to maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act. Failure to achieve and maintain an effective internal control environment could have a material adverse effect on the price of our common stock.

Note: The foregoing factors pursuant to the Private Securities Litigation Reform Act of 1995 should not be construed as exhaustive. In addition to the foregoing, we wish to refer readers to other factors discussed elsewhere in this report as well as other filings and reports with the SEC for a further discussion of risks and uncertainties that could cause actual results to differ materially from those contained in forward-looking statements. We undertake no obligation to publicly release the result of any revisions to any such forward-looking statements, which may be made to reflect the events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal operating facilities at December 31, 2014 were as follows:

Operating Facilities	Square Footage	Segment
Houston, Texas	208,000	Global Headquarters and Solutions
Harahan, Louisiana	150,000	Systems
Denver, Colorado	29,000	Solutions
Edinburgh, Scotland	23,000	Software
Jebel Ali, Dubai, United Arab Emirates	2,000	International Sales Headquarters
	412,000	

Each of these operating facilities is leased by us under long-term lease agreements. These lease agreements have terms that expire ranging from 2015 to 2025. See Footnote 14 “Operating Leases” of Footnotes to Consolidated Financial Statements.

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In addition, we lease offices in Cranleigh, England; Beijing, China; Rio de Janiero, Brazil; and Moscow, Russia to support our global sales force. We lease offices for our seismic data processing centers in Egham, England; Port Harcourt, Nigeria; Luanda, Angola; Moscow, Russia; Cairo, Egypt; Villahermosa, Mexico; Rio de Janeiro, Brazil; Port of Spain, Trinidad; West Perth, Australia; and Oklahoma City, Oklahoma. We also lease other facilities in Stafford, Texas; St. Rose, Louisiana; and Calgary, Canada. Our executive headquarters is located at 2105 CityWest Boulevard, Suite 400, Houston, Texas. The machinery, equipment, buildings and other facilities owned and leased by us are considered by our management to be sufficiently maintained and adequate for our current operations.

Item 3. Legal Proceedings

WesternGeco

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

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

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

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

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

As previously disclosed, we have taken a loss contingency accrual of $123.8 million related to this case. Post-judgment interest will continue to accrue until this legal matter is fully resolved. Our assessment of our potential loss contingency may change in the future due to developments in the case and other events, such as changes in applicable law, and such reassessment could lead to the determination that no loss contingency is probable or that a greater or lesser loss contingency is probable. Any such reassessment could have a material effect on our financial condition or results of operations.

We and WesternGeco have each appealed the Final Judgment to the United States Court of Appeals for the Federal Circuit. We filed our appeal brief on September 4, 2014. WesternGeco’s appeal brief was filed on October 21, 2014. Oral arguments have been scheduled for March 5, 2015. If the adverse ruling is affirmed, we intend to pursue all available opportunities to make further appeals.

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In order to stay the judgment during the appeal, we arranged with sureties to post an appeal bond with the trial court on our behalf in the amount of $120.0 million. The terms of the appeal bond arrangements provide the sureties the contractual right for as long as the bond is outstanding to require us to post cash collateral for up to the full amount of the bond. If the sureties exercise their right to require collateral while the appeal bond is outstanding, we would intend to utilize a combination of cash on hand and undrawn balances available under our New Credit Facility. If we are required to collateralize the full amount of the bond, we might also seek additional debt and/or equity financing. The collateralization of the full amount of the bond could have a material adverse effect on our liquidity. Any requirement that we collateralize the appeal bond will reduce our liquidity and may reduce the amount otherwise available to be borrowed under our New Credit Facility. No assurances can be made whether our efforts to raise additional cash would be successful and, if so, on what terms and conditions, and at what cost we might be able to secure any such financing. For additional discussion about the effect of posting an appeal bond on our liquidity, financial condition and results of operations, see Item 7. “Management’s Discussion and Analysis — Meeting our Liquidity Requirements — Loss Contingency – WesternGeco Lawsuit” in Part II of this Form 10-K.

Other Litigation

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

Item 4. Mine Safety Disclosures

Not applicable.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock trades on the New York Stock Exchange ("NYSE") under the symbol "IO." The following table sets forth the high and low sales prices of the common stock for the periods indicated, as reported in NYSE composite tape transactions.

	Price Range	
Period	High	Low
Year ended December 31, 2014:		
Fourth Quarter	$3.02	$2.29
Third Quarter	4.36	2.79
Second Quarter	4.73	3.85
First Quarter	4.54	2.82
Year ended December 31, 2013:		
Fourth Quarter	$5.36	$2.81
Third Quarter	6.58	4.59
Second Quarter	6.90	5.55
First Quarter	7.70	6.23

We have not historically paid, and do not intend to pay in the foreseeable future, cash dividends on our common stock. We presently intend to retain cash from operations for use in our business, with any future decision to pay cash dividends on our common stock dependent upon our growth, profitability, financial condition and other factors our board of directors consider relevant. In addition, the terms of our New Credit Facility and the indenture governing the Notes prohibit us from paying dividends on or repurchasing shares of our common stock without the prior consent of the lenders.

The terms of our New Credit Facility contain covenants that restrict us from paying cash dividends on our common stock, or repurchasing or acquiring shares of our common stock, unless (i) there is no event of default under the New Credit Facility, (ii) there is excess availability under the New Credit Facility greater than $40.0 million (or, at the time that the borrowing base formula amount is less than $40.0 million, the borrowers' level of liquidity (as defined in the revolving credit and security agreement) is greater than $40.0 million) and (iii) the agent receives satisfactory projections showing that excess availability under the New Credit Facility for the immediately following period of ninety (90) consecutive days will not be less than $40.0 million (or, at the time that the borrowing base formula amount is less than $40.0 million, the borrowers' level of liquidity is greater than $40.0 million). The aggregate amount of permitted cash dividends and stock repurchases may not exceed $10.0 million in any fiscal year or $40.0 million in the aggregate from and after the closing date of the New Credit Facility.

The indenture governing the Notes contains certain covenants that, among other things, limit our ability to pay certain dividends or distributions on our common stock or purchase, redeem or retire shares of our common stock, unless (i) no default under the indenture has occurred or would occur as a result of that payment, (ii) we would have, after giving pro forma effect to the payment, been permitted to incur at least $1.00 of additional indebtedness under a fixed charge coverage ratio test under the indenture, and (iii) the total cumulative amount of all such payments would not exceed a sum calculated by reference to, among other items, our consolidated net income, proceeds from certain sales of equity or assets, certain conversions or exchanges of debt for equity and certain other reductions in our indebtedness.

On December 31, 2014, there were 765 holders of record of our common stock.

During the three months ended December 31, 2014, we withheld and subsequently canceled shares of our common stock to satisfy minimum statutory income tax withholding obligations on the vesting of restricted stock for employees. The date of cancellation, number of shares and average effective acquisition price per share, were as follows:

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Period	(a) Total Number of Shares Acquired	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Program	(d) Maximum Number (or Approximate Dollar Value) of Shares That May Yet Be Purchased Under the Plans or Program
October 1, 2014 to October 31, 2014	—	$—	Not applicable	Not applicable
November 1, 2014 to November 30, 2014	—	$—	Not applicable	Not applicable
December 1, 2014 to December 31, 2014	77,070	$2.47	Not applicable	Not applicable
Total	77,070	$2.47		

Item 6. Selected Financial Data

Special Items Affecting Comparability

The selected consolidated financial data set forth below under “Historical Selected Financial Data” with respect to our consolidated statements of operations for 2014, 2013, 2012, 2011 and 2010, and with respect to our consolidated balance sheets at December 31, 2014, 2013, 2012, 2011 and 2010, have been derived from our audited consolidated financial statements.

Our results of operations and financial condition have been affected by restructuring activities, legal contingencies and settlements, dispositions, debt refinancings and impairments and write-downs of assets during the periods presented, which affect the comparability of the financial information shown. In particular, our results of operations for the years in the 2010 – 2014 time period were impacted by the following items (before tax):

	Years Ended December 31,				
	2014	2013	2012	2011	2010
	(In thousands)				
Cost of sales:					
Write-down of multi-client data library	$(100,100)	$(5,461)	$—	$—	$—
Write-down of excess and obsolete inventory	$(6,952)	$(21,197)	$(1,326)	$—	$—
Operating expenses:					
Impairment of goodwill and intangible assets	$(23,284)	$—	$—	$—	$—
Write-down of receivables	$(8,214)	$(9,157)	$(5,640)	$—	$—
Write-down of marine equipment	$—	$—	$(5,928)	$—	$—
Interest expense:					
Write-down of deferred financing charges, including amortization of non-cash debt discounts	$—	$—	$—	$—	$(18,777)
Other income (expense):					
Reversal of (accrual for) loss contingency related to legal proceedings	$69,557	$(183,327)	$(10,000)	$—	$—
Gain on sale of Source product line	$6,522	$—	$—	$—	$—
Gain on sale of cost method investments	$5,463	$3,591	$—	$—	$—
Gain on legal settlements	$—	$—	$30,895	$—	$24,500
Equity in earnings (losses) of investments	$(49,485) [a]	$(42,320)	$297	$(22,862)	$(23,724)
Loss on disposition of land equipment division	$—	$—	$—	$—	$(38,115)
Fair value adjustments of a warrant associated with certain bridge financing arrangements	$—	$—	$—	$—	$12,788
Conversion payment of preferred stock	$—	$(5,000)	$—	$—	$—

(a) Includes the full write-down of our investment in INOVA Geophysical of $30.7 million.

The historical selected financial data shown below should not be considered as being indicative of future operations, and should be read in conjunction with Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and the notes thereto included elsewhere in this Form 10-K.

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Historical Selected Financial Data

	Years Ended December 31,				
	2014	2013	2012	2011	2010
	(In thousands, except for per share data)				
Statement of Operations Data:					
Net revenues	$509,558	$549,167	$526,317	$454,621	$444,322
Gross profit	62,223	159,313	215,801	173,445	165,733
Income (loss) from operations	(117,929)	16,396	74,527	66,795	52,847
Net income (loss) applicable to common shares	(128,252)	(251,874)	61,963	23,422	(38,774)
Net income (loss) per basic share	$(0.78)	$(1.59)	$0.40	$0.15	$(0.27)
Net income (loss) per diluted share	$(0.78)	$(1.59)	$0.39	$0.15	$(0.27)
Weighted average number of common shares outstanding	164,089	158,506	155,801	154,811	144,278
Weighted average number of diluted shares outstanding	164,089	158,506	162,765	156,090	144,278
Balance Sheet Data (end of year):					
Working capital	$222,099	$248,857	$164,693	$163,677	$171,851
Total assets	617,257	864,671	820,583	674,058	631,857
Long-term debt	190,594	220,152	105,328	105,112	108,660
Total equity	135,712	257,885	499,019	425,812	380,447
Other Data:					
Investment in multi-client library	$67,785	$114,582	$145,627	$143,782	$64,426
Capital expenditures	8,264	16,914	16,650	11,060	7,372
Depreciation and amortization (other than multi-client library)	27,656	18,158	16,202	13,917	24,795
Amortization of multi-client library	64,374	86,716	89,080	77,317	85,940

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Note: The following should be read in conjunction with our Consolidated Financial Statements and related Footnotes to Consolidated Financial Statements that appear elsewhere in this Annual Report on Form 10-K. References to “Footnotes” in the discussion below refer to the numbered Footnotes to Consolidated Financial Statements.

Executive Summary

Our Business

The terms “we,” “us” and similar or derivative terms refer to ION Geophysical Corporation and its consolidated subsidiaries, except where the context otherwise requires or as otherwise indicated.

We are a global, technology-focused company that provides geophysical technology, services and solutions to the global oil and gas industry. We provide our services and products through four business segments – Solutions, Software, Systems and Ocean Bottom Services (the segment name for OceanGeo) – as well as through our INOVA Geophysical joint venture.

For a full discussion of our business, see Part I, Item 1. “Business.”

Macroeconomic Conditions

Demand for our services and products is cyclical and dependent upon activity levels in the oil and gas industry, particularly our customers’ willingness to invest capital in the exploration for oil and natural gas. Our customers’ capital spending programs are generally based on their outlook for near-term and long-term commodity prices, economic growth, commodity demand and estimates of resource production.

In 2013, we started seeing decreased spending on exploration by E&P companies, which are reportedly focusing more of their current spending towards production optimization of existing assets. We believe this was due to several factors, but primarily because operational cash flows of E&P companies were no longer sufficient to cover capital expenditures and cash was increasingly being returned to shareholders in the form of dividends. E&P companies have

been relying on asset sales and debt financings to fund capital requirements amid demands for greater returns to shareholders.

E&P companies use their cash flow from operations to reinvest in productive assets through capital expenditures, build surplus cash for eventual downturns, or return cash to stakeholders. Due to relatively stable oil prices and increasing exploration and production costs, free cash flow at E&P companies as a whole had generally decreased over the last several years. By 2013, the combination of these factors led many E&P companies to a position where they have been unable to cover both their capital expenditure budgets and targeted cash returns to shareholders. As a result, E&P companies have turned their focus to spending reductions, with exploration spending receiving the largest reductions and seismic spending being one of the most discretionary parts of their exploration budgets.

Similar to ION, many seismic industry participants have been reporting lower year-over-year revenue, and decreased funding levels for contract and multi-client exploration activities.

The following is a summary of recent oil and gas pricing trends:

	Brent Crude (per bbl)		West Texas Intermediate Crude (per bbl)		Henry Hub Natural Gas (per mcf)	
Quarter ended	High	Low	High	Low	High	Low
12/31/2014	$94.57	$55.27	$91.01	$53.27	$4.49	$2.89
9/30/2014	$110.84	$94.53	$105.34	$91.16	$4.46	$3.75
6/30/2014	$115.19	$103.37	$107.26	$99.42	$4.83	$4.28
3/31/2014	$111.26	$105.73	$104.92	$91.66	$6.15	$4.01
12/31/2013	$113.27	$103.08	$104.10	$92.30	$4.46	$3.45
9/30/2013	$117.15	$103.19	$110.53	$97.99	$3.81	$3.23
6/30/2013	$109.66	$96.84	$98.44	$86.68	$4.41	$3.57
3/31/2013	$118.90	$106.41	$97.94	$90.12	$4.07	$3.11

Source: U.S. Energy Information Administration (EIA).

In the past few years, crude oil prices in North America had traded in a fairly limited band between $85 – $110 per barrel, maintained by competing forces of global geopolitical uncertainties offset by increasing North American production growth. In recent months, however, crude oil prices have dropped to prices as low as $45 and $46 for WTI and Brent, respectively, since December 2014 as the world economic outlook continues to weaken, North American production continues to expand, and more recently, Saudi Arabia has publicly stated its intention to support its global market share by maintaining, production levels at the expense of lower prices.

The weakening economic outlook for non-U.S. oil demand, especially in Europe, has put more downward pressure on prices. Thus, the bottom-end of the price range for crude oil has decreased significantly beginning in the fourth quarter of 2014 compared to 2013. Meanwhile the Brent–WTI spread has narrowed significantly.

The price for Brent crude will influence our customers' spending in international markets, while the prices for WTI and U.S. natural gas will influence our customers' spending in the North American market. Given the historical volatility of crude prices, there remains a risk that prices could deteriorate further going forward due to increased domestic crude oil production, slowing growth rates in emerging countries like China, stagnant economies in Europe, and the potential for significant supply/demand imbalances. However, if the global supply of oil were to decrease due to government instability in a major oil-producing nation and energy demand starts to increase in emerging countries such as China and India, the world could see prices increase for Brent and WTI as in prior years.

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The price range for natural gas in the U.S. was higher in 2014 compared to 2013. Natural gas prices improved during 2014 largely due to above average storage withdrawals in response to extremely cold winter weather in many parts of the U.S., lower net imports from Canada and higher residential, commercial and industrial demand. The improvement in demand for natural gas has resulted in significant declines in natural gas inventories in the U.S. during the first half of 2014. Natural gas inventories have recovered to approximately 1% below the five-year average as of the end of 2014, from 8% below the five-year average as of the end of 2013 due to a lack of extremely cold weather in the early part of the winter months of 2014-2015 as was experienced in the previous year's winter months. However, in spite of reduced inventories during the first half of 2014 and increases in natural gas prices, customer spending in the natural gas shale plays has been limited due to associated gas being produced from unconventional oil wells in North America. As a result of natural gas production growth outpacing demand in the U.S., natural gas prices continue to be weak relative to prices experienced in 2006 through 2008 and are expected to remain below levels considered economical for new investments in numerous natural gas fields. If natural gas production growth continues to surpass demand in the U.S., whether the supply comes from conventional or unconventional production or associated natural gas production from oil wells, prices for natural gas could be constrained for an extended period.

Impact to Our Business

The recent reduction in exploration spending has had an impact on our results of operations for 2014, especially those of our Solutions segment. We have seen a softening of customer underwriting of our new venture programs. We continue to maintain high standards for underwriting of any new projects, and have delayed certain new venture programs that were originally planned to occur during 2014. We invested approximately $47 million less in our multi-client data library during 2014, compared to 2013.

We saw a slowdown in our data processing business during 2014. During the second quarter, various customers delayed processing projects and this trend has continued, which negatively affected our backlog. Data processing revenues were down in 2014 compared to 2013, and we expect our data processing business to remain soft into 2015. During 2014, we took measured actions to reduce our data processing cost structure.

Our business has traditionally been seasonal, with the strongest demand for our services and products often in the fourth quarter of our fiscal year. As discussed above, we have seen reduced levels of exploration-related spending by E&P companies as those companies focus more of their current spending on optimizing production of existing assets. At December 31, 2014, our Solutions segment backlog, which consists of commitments for (i) data processing work and (ii) both multi-client new venture projects and proprietary projects by our GeoVentures group underwritten by our customers, was $46.7 million, compared with $84.4 million at December 31, 2013. The decline in backlog was primarily due to (i) the softening of customer underwriting for new ventures projects and (ii) the delay of certain processing projects by customers. We anticipate that the majority of our backlog will be recognized as revenue over the first half of 2015.

Our Software segment revenues increased slightly for 2014 compared to the same period of 2013. Our Software segment experienced record revenue quarters in the first half of 2014, which was mostly offset by a reduction in revenues in the fourth quarter.

Our traditional seismic contractor customers are also experiencing weakened demand due to the reduction in seismic spend by their customers. As a result, our systems segment continues to experience weak year-over-year sales. Our Systems segment revenues decreased primarily because of lower towed streamer products sales and no ocean bottom systems sales in 2014. These declines were partially offset by an increase in repair and replacement marine positioning equipment revenues.

In January 2014, we increased our ownership in OceanGeo, our seabed data acquisition joint venture, from 30% to 70%. In July 2014, we increased our ownership in OceanGeo to 100%. Our 2014 OBS results include the consolidated revenues of OceanGeo for February through December. During those eleven months, OceanGeo recognized $103.2 million of revenues for the work performed in Trinidad that was completed in May and from other projects offshore West Africa. OceanGeo began work on a new contract in West Africa in late July and completed it successfully. OceanGeo was awarded an additional short-term project nearby and completed that project in the fourth quarter. These projects are in an area where OceanGeo is pursuing several tenders for additional long-term work.

Prior to February, we accounted for our interest in OceanGeo as an equity method investment. For information regarding our acquisition of OceanGeo, see Footnote 3 “Acquisition of OceanGeo” of Footnotes to Consolidated Financial Statements.

INOVA Geophysical reported a decrease in revenues for 2014, compared to 2013. This decrease in revenues primarily occurred as a result of decreased sales during 2014 as a result of (i) the soft land seismic market caused by the reduction in exploration spending by E&P companies and (ii) reduced purchases by BGP.

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We continue to monitor the global economy, the demand for crude oil and natural gas and the resultant impact on the capital spending plans and operations of our E&P customers in order to plan our business. We remain confident that, despite current marketplace issues that we describe above, we have positioned ourselves to take advantage of the next upturn in the energy cycle by shifting our focus towards E&P solutions and away from equipment sales, and by diversifying our offerings across the E&P lifecycle.

It is our view that technologies that add a competitive advantage through improved imaging, cost reductions or improvements in well productivity will continue to be valued in our marketplace. We believe that our newest technologies, such as Calypso, WiBand, Orca and Narwhal, will continue to attract customer interest, because those technologies are designed to deliver improvements in image quality within more productive delivery systems.

Restructuring and Other Charges

Due to the current economic and market conditions described above, including significant reductions in E&P capital expenditures, in the fourth quarter we initiated restructurings across all our segments, except for our Ocean Bottom Services segment, reducing our overall workforce by approximately 10%. This action was taken to rightsize the Company to meet the current demands of the marketplace.

In connection with this restructuring, we incurred a total of $2.3 million of severance charges, which will be paid out in 2015. We expect that this reduction will result in an annual cash savings of approximately $15.0 million.

Additionally, we incurred charges to write-down the value of certain assets, including our multi-client data library, our investment in INOVA Geophysical, our goodwill in the Marine Systems reporting unit and excess and obsolete inventory totaling approximately $176.1 million. See Footnote 2 “Impairments, Restructurings and Other Charges” of Footnotes to Consolidated Financial Statements.

Key Financial Metrics

Our results of operations have been materially affected by the impairments and restructuring charges within our Solutions, Systems and Software segments and with respect to our INOVA Geophysical joint venture, and by other charges, which affect the comparability of certain of the financial information contained in this Form 10-K. In order to assist with the comparability to our historical results of operations, certain of the financial metrics tables and the discussion below exclude charges related to impairments, the restructuring and other write-downs. The gross profit (loss), income (loss) from operations, costs and expenses below that are identified as “As Adjusted” reflect the exclusion of the restructuring and other charges shown and described in the tables below. We believe that the non-GAAP presentation of results of operations excluding these items provides a more meaningful comparison of reporting periods.

The tables below provide (i) a summary of our net revenues for our company as a whole, and by segment, for 2014, 2013 and 2012, and (ii) an overview of other certain key financial metrics for our company as a whole and our four business segments on a comparative basis for 2014, 2013 and 2012, as reported and as adjusted in all three years for the restructuring and other charges recorded for those years.

For certain tabular information on the operating results of our INOVA Geophysical joint venture, see “— Other Items — Equity in Earnings (Losses) of Investments.”

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	Years Ended December 31,		
	2014	2013	2012
	(In thousands)		
Net revenues:			
Solutions:			
New Venture	$98,649	$154,578	$147,346
Data Library	66,180	111,998	88,085
Total multi-client revenues	164,829	266,576	235,431
Data Processing	113,075	120,808	115,834
Total	$277,904	$387,384	$351,265
Systems:			
Towed Streamer	$43,995	$66,991	$77,769
Ocean Bottom Equipment	—	7,307	14,823
Other	44,422	48,134	39,404
Total	$88,417	$122,432	$131,996
Software:			
Software Systems	$36,203	$35,418	$39,738
Services	3,790	3,933	3,318
Total	$39,993	$39,351	$43,056
Ocean Bottom Services	$103,244	$—	$—
Total	$509,558	$549,167	$526,317

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	Year Ended December 31, 2014			Year Ended December 31, 2013			Year Ended December 31,		
	As Reported	Restructuring and Other Charges	As Adjusted	As Reported	Restructuring and Other Charges	As Adjusted	As Reported	Restructuring and Other Charges	
	(In thousands, except per share data)								
Gross profit:									
Solutions	$(24,345)	$100,825 [a]	$76,480	$111,108	$5,461 [a]	$116,569	$132,950	$—	
Systems	29,829	7,580 [b]	37,409	19,999	25,688 [c]	45,687	50,790	1,280	[d]
Software	28,835	137 [e]	28,972	28,206	—	28,206	32,061	—	
Ocean Bottom Services	27,904	—	27,904	—	—	—	—	—	
Total	$62,223	$108,542	$170,765	$159,313	$31,149	$190,462	$215,801	$1,280	
Gross margin:									
Solutions	(9)%	37 %	28 %	29 %	1 %	30 %	38 %	— %	
Systems	34 %	8 %	42 %	16 %	21 %	37 %	38 %	1 %	
Software	72 %	— %	72 %	72 %	— %	72 %	74 %	— %	
Ocean Bottom Services	27 %	— %	27 %	— %	— %	— %	— %	— %	
Total	12 %	22 %	34 %	29 %	6 %	35 %	41 %	— %	
Income (loss) from operations:									
Solutions	$(80,653)	$102,740 [a]	$22,087	$61,146	$5,461 [a]	$66,607	$88,589	$—	
Systems	(23,521)	32,492 [b]	8,971	(9,957)	28,050 [c]	18,093	10,132	12,848	[d]
Software	20,212	223 [e]	20,435	23,602	—	23,602	28,129	—	
Ocean Bottom Services	19,070	—	19,070	—	—	—	—	—	
Corporate and other	(53,037)	6,487 [f]	(46,550)	(58,395)	9,157 [g]	(49,238)	(52,323)	—	
Total	$(117,929)	$141,942	$24,013	$16,396	$42,668	$59,064	$74,527	$12,848	
Operating margin:									
Solutions	(29)%	37 %	8 %	16 %	1 %	17 %	25 %	— %	
Systems	(27)%	37 %	10 %	(8)%	23 %	15 %	8 %	9 %	
Software	51 %	— %	51 %	60 %	— %	60 %	65 %	— %	
Ocean Bottom Services	18 %	— %	18 %	— %	— %	— %	— %	— %	
Corporate and other	(10)%	1 %	(9)%	(11)%	2 %	(9)%	(10)%	— %	
Total	(23)%	28 %	5 %	3 %	8 %	11 %	14 %	3 %	
Net income (loss) applicable	$(128,252)	$94,143 [h]	$(34,109)	$(251,874)	$271,208 [i]	$19,334	$61,963	$(369)	

to common shares								
Diluted net income (loss) per common share	$(0.78)	$0.57	$(0.21)	$(1.59)	$1.71	$0.12	$0.39	$—

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(a) Primarily relates to the write-down of our multi-client data library in 2014 and 2013 with the Solutions segment. Also, 2014 was impacted by the impairment of intangible assets and severance-related charges.

(b) Primarily relates to the write-down of goodwill, impacting income (loss) from operations, in addition to inventory write-downs, impacting gross profit (loss), and severance-related charges within the Systems segment.

(c) Represents excess and obsolete inventory and severance-related charges within the Systems segment in 2013.

(d) Represents the write-down of excess and obsolete inventory, marine equipment and receivables within the Systems segment in 2012.

(e) Represents severance-related charges within the Software segment.

(f) Represents the write-down of receivables due from INOVA Geophysical, in addition to severance-related charges.

(g) Represents the write-down of the carrying value of all receivables due from OceanGeo at September 30, 2013.

(h) In addition to items (a), (b), (e) and (f), also impacting net income (loss) applicable to common shares was (i) the full write-down of our equity method investment in INOVA Geophysical of $30.7 million, in addition to our share of charges related to excess and obsolete inventory and customer bad debts of $3.5 million, (ii) a reduction in the WesternGeco legal contingency by $69.6 million, and (iii) non-recurring gains on the sale of a cost method investment of $5.5 million and on the sale of the Source product line of $6.5 million (before tax).

(i) In addition to items (a),(c) and (g), also impacting net income (loss) applicable to common shares was (i) a charge to income tax expense related to our establishing a valuation allowance on our net deferred tax assets, (ii) a third quarter payment made to the holder of our outstanding Series D Preferred Stock in connection with the holder’s conversion of the Series D Preferred Stock, (iii) our additional loss contingency accrual related to the WesternGeco legal proceedings, (iv) $18.8 million representing ION’s 49% share of restructuring charges within the INOVA joint venture, associated with the impairment of intangible assets, write-down of excess and obsolete inventory and rental equipment, and severance-related charges, and (v) $12.5 million representing losses incurred as a result of ION taking a larger ownership position in OceanGeo.

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

We account for our 49% interest in INOVA Geophysical as an equity method investment and record our share of earnings (losses) of INOVA Geophysical on a one fiscal quarter lag basis. Thus, for 2014, 2013 and 2012, we recognized in our consolidated results of operations our share of earnings (losses) in INOVA Geophysical of approximately $(19.5) million (excluding the write-down of our investment in INOVA), $(22.5) million and $0.3 million, respectively.

Prior to our acquisition of a controlling interest in OceanGeo in January 2014, we accounted for our interest in OceanGeo as an equity method investment and recorded our share of earnings of OceanGeo on a then current quarter basis. In February 2014, we began to consolidate the results of OceanGeo.

For a discussion of factors that could impact our future operating results and financial condition, see Item 1A. “Risk Factors” above.

Results of Operations

Year Ended December 31, 2014 (As Adjusted) Compared to Year Ended December 31, 2013 (As Adjusted)

Our total net revenues of $509.6 million for 2014 decreased $39.6 million, or 7%, compared to total net revenues for 2013. Our overall gross profit percentage for 2014 was 34%, as adjusted, compared to 2013’s gross profit percentage of 35%, as adjusted. Total operating expenses, as adjusted, as a percentage of net revenues for 2014 and 2013 were 29% and 24%, respectively. During 2014, income from operations of $24.0 million, as adjusted, compared to $59.1 million, as adjusted, for 2013.

Net loss for 2014 was $34.1 million, as adjusted, or $(0.21) per share, compared to net income of $19.3 million, as adjusted, or $0.12 per diluted share for 2013. As noted above, net loss for 2014 and 2013 included restructuring and other charges totaling $94.1 million and $271.2 million, respectively, impacting our diluted earnings per share by $0.57 and $1.71, respectively.

Net Revenues, Gross Profits and Gross Margins (As Adjusted)

Solutions — Net revenues for 2014 decreased by $109.5 million, or 28%, to $277.9 million, compared to $387.4 million for 2013. Revenues for our multi-client businesses within Solutions decreased due to (i) the continued softness of exploration spending and (ii) record data library sales in the fourth quarter of 2013 that were not repeated in 2014. Data processing revenues were also impacted by the softness in exploration spending, but benefited by $15.0 million of revenues recognized in the first quarter 2014 that related to work performed for a customer in 2013.

Gross profit decreased by $40.1 million to $76.5 million, as adjusted, representing a 28% gross margin, compared to $116.6 million, as adjusted, or a 30% gross margin, for 2013. This decrease was attributable to the significant revenue decline in our multi-client businesses in 2014, which was partially offset by the inclusion of $15.0 million of revenues recognized in the first quarter of 2014 that related to work performed for a customer in 2013.

Systems — Net revenues for 2014 decreased by $34.0 million, or 28%, to $88.4 million, compared to $122.4 million for 2013. This decrease in revenues was principally due to (i) lower sales of new marine positioning products; (ii) a lack of ocean bottom cable systems sales in 2014; (iii) lower geophone string sales; partially offset by (iv) additional marine repair and replacement revenues in 2014 versus 2013. Gross profit for 2014 decreased by $8.3 million to $37.4 million, as adjusted, representing a 42% gross margin, compared to $45.7 million, as adjusted, or a 37% gross margin, for 2013. Gross profit decreased in line with the decrease in revenues. Gross margin increased primarily due to cost savings from the restructuring in 2013 that took full effect in 2014 and to a lesser extent on a change in sales mix to higher margin repair and replacement business.

Software — Net revenues for 2014 increased by $0.6 million, or 2%, to $40.0 million, compared to $39.4 million for 2013. This increase in revenues was due to record revenue quarters in the first half of 2014, which was mostly offset by a reduction in revenues in the fourth quarter. Gross profit for 2014 increased by $0.8 million to $29.0 million, as adjusted, representing a 72% gross margin, compared to $28.2 million, for 2013, which represented a 72% gross margin. Gross profit increased slightly and is primarily due to recent fluctuations in the U.K. Pound Sterling relative to the U.S. Dollar.

Ocean Bottom Services — Net revenues for 2014 were $103.2 million and gross profit was $27.9 million, representing a 27% gross margin. During 2014, we established a new operating segment through the acquisition of OceanGeo. In February, we began consolidating OceanGeo and therefore have included OceanGeo revenues and gross profit for 2014 related to projects completed in Trinidad and West Africa. In 2013, OceanGeo was an equity-method investment and not a consolidated subsidiary. Therefore, our share of OceanGeo's results of operations were recorded as equity in income (losses) of investment. See "Other Items — Equity in Losses of Investments" below.

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Operating Expenses (As Adjusted)

The following table presents the "As Adjusted" in both 2014 and 2013, excluding special charges that resulted from both the 2014 and 2013 restructurings and other write-downs (in thousands):

	Year Ended December 31, 2014			Year Ended December 31, 2013		
	As Reported	Special Items[a]	As Adjusted	As Reported	Special Items[b]	As Adjusted
Operating expenses:						
Research, development and engineering	$41,009	$(572)	$40,437	$37,742	$(1,388)	$36,354
Marketing and sales	39,682	(326)	39,356	38,583	(277)	38,306
General, administrative and other operating expenses	76,177	(9,218)	66,959	66,592	(9,854)	56,738
Impairment of goodwill and intangible assets	23,284	(23,284)	—	—	—	—
Total operating expenses	$180,152	$(33,400)	$146,752	$142,917	$(11,519)	$131,398
Income (loss) from operations	$(117,929)	$141,942	$24,013	$16,396	$42,668	$59,064

(a) Includes (i) the write-down of goodwill related to our Marine Systems reporting unit, (ii) the write-down of intangible assets, (iii) the write-down of receivables related to INOVA Geophysical and other customer bad debt, and (iv) severance charges affecting operating expense lines.

(b) Includes (i) the write-down of the remaining carrying value of our receivables from OceanGeo, and (ii) restructuring charges affecting the operating expense lines.

Research, Development and Engineering — Research, development and engineering expense was $40.4 million, as adjusted, or 8% of net revenues, for 2014, an increase of $4.0 million compared to $36.4 million, as adjusted, or 7% of net revenues, for 2013. This increase was due to increased investment in our Calypso ocean bottom cable system to be used in OBS data acquisition services by OceanGeo.

Marketing and Sales — Marketing and sales expense of $39.4 million, as adjusted, or 8% of net revenues, for 2014, increased $1.1 million compared to $38.3 million, as adjusted, or 7% of net revenues, for 2013. This increase was primarily due to an increase in marketing and sales personnel in our Solutions segment.

General, Administrative and Other Operating Expenses — General, administrative and other operating expenses of $67.0 million, as adjusted, or 13%, for 2014 increased $10.3 million compared to $56.7 million, or 10%, as adjusted, for 2013. This increase was primarily related to the consolidation of general and administrative expenses incurred at OceanGeo.

Other Items

Interest Expense, net — Interest expense, net, of $19.4 million for 2014 increased compared to $12.3 million for 2013. This increase is directly related to the issuance of the Notes in May 2013. For additional information, please refer to "— Liquidity and Capital Resources — Sources of Capital" below.

Equity in Losses of Investments — We account for our investment in INOVA Geophysical as an equity method investment.

We record our share of earnings and losses of our 49% interest in INOVA Geophysical on a one fiscal quarter lag basis. Thus, our share of INOVA Geophysical's earnings (losses) for the periods from October 1, 2013 to September 30, 2014 ("Fiscal 2014") and from October 1, 2012 to September 30, 2013 ("Fiscal 2013") were included in our consolidated financial results for fiscal 2014 and fiscal 2013, respectively. For 2014, we recorded our 49% share of equity in INOVA Geophysical's losses of approximately $50.2 million (including (i) $3.5 million representing our share of charges associated with the write-down of excess and obsolete inventory and certain receivables and (ii) the $30.7 million write-down of our equity interest in INOVA Geophysical to zero). For 2013, we recorded our 49% share in INOVA Geophysical's losses of approximately $22.5 million (including $18.8 million representing our share of several restructuring charges and write-downs of excess and obsolete inventory). Results for Fiscal 2014 were

primarily impacted by a 51% decrease in sales during twelve months ended September 30, 2014 as a result of (i) the soft land seismic market caused by the reduction in exploration spending by E&P companies and (ii) reduced purchases by BGP. For a discussion of the impairment of our equity method investment in INOVA, see Footnote 5 “Equity Method Investments” of Footnotes to Consolidated Financial Statements contained elsewhere in this Annual Report on Form 10-K.

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The following table reflects the summarized financial information for INOVA Geophysical for Fiscal 2014 and Fiscal 2013 (in thousands):

	Fiscal 2014		Fiscal 2013	
Total net revenues	$89,975		$183,619	
Gross profit (loss)	$247	(1)	$(1,988)	(2)
Income (loss) from operations	$(34,540)	(1)	$(44,463)	
Net income (loss)	$(40,087)		$(46,149)	(2)

(1) Impacting INOVA Geophysical's gross profit in Fiscal 2014, is $3.8 million of a write-down of excess and obsolete inventory. In addition to the special item impacting gross profit (loss), income (loss) from operations was also impacted by $3.4 million of charges related to customer bad debts.

(2) Impacting INOVA Geophysical's gross profit in Fiscal 2013, is $36.5 million of restructuring and special items associated with the impairment of intangible assets, write-down of excess and obsolete inventory and rental equipment, and severance-related charges. In addition to the restructuring and special items impacting gross profit, net income (loss) was also impacted by $1.8 million of other restructuring and special items.

For the period of January 1 to January 26, 2014, we accounted for our equity interest in OceanGeo as an equity method investment. For that period, our share of OceanGeo's earnings was $0.7 million. Following our acquisition of a controlling interest in OceanGeo on January 27, 2014, OceanGeo's results of operations are consolidated into our results of operations. For additional information about the acquisition of OceanGeo, see Footnote 3 "Acquisition of OceanGeo" of Footnotes to Consolidated Financial Statements. In 2013, we recorded our share of equity in OceanGeo's losses of approximately $19.8 million.

Other Income (Expense) — Other income for 2014 was $79.9 million compared to other expense of $182.5 million for 2013. The difference primarily relates to changes in our accrual for loss contingency related to a legal matter. See further discussion at Part 1, Item 3, "Legal Proceedings."

The following table reflects the significant items of other income (expense) (in thousands):

	Years Ended December 31,	
	2014	2013
Reduction of (accrual for) loss contingency related to legal proceedings (Footnote 17)	$69,557	$(183,327)
Gain on sale of a product line[1]	6,522	—
Gain on sale of a cost method investment[2]	5,463	3,591
Other income (expense)	(1,682)	(2,794)
Total other income (expense)	$79,860	$(182,530)

(1) In 2014, we sold our Source product line for approximately $14.4 million, net of transaction fees, recording a gain of approximately $6.5 million before taxes. The historical results of this product line have not been material to our results of operations.

(2) Includes the 2014 sale of our cost method investment in a privately-owned U.S.-based technology company for total proceeds of approximately $16.5 million, of which $14.1 million was due and paid at closing.

Income Tax Expense — Income tax expense for 2014 was $20.6 million compared to $25.7 million for 2013. Our effective tax rates for 2014 and 2013 were (19.2)% and (11.6)%, respectively. Our effective tax rate for 2014 was negatively impacted by the establishment of a valuation allowance related to our U.S. losses incurred in 2014. See further discussion of establishment of the deferred tax valuation allowance at Footnote 8 "Income Taxes" of Footnotes to Consolidated Financial Statements. Our income tax expense for 2014 relates to income from our non-U.S. businesses, including OceanGeo. This foreign tax expense has not been offset by the tax benefits on losses within the U.S. and other jurisdictions, from which we cannot currently benefit.

Preferred Stock Dividends and Conversion Payment of Preferred Stock — On September 30, 2013, the holder of all of the outstanding shares of our Series D Preferred Stock converted all of the shares into 6,065,075 shares of our common stock. Concurrent with the holder's conversion of its shares of Series D Preferred Stock, we paid the holder a cash payment of approximately $5.0 million, representing dividends in respect of the Preferred Stock and the estimated present value of certain future dividends in respect of the Series D Preferred Stock. As a result of the

conversion, all outstanding shares of Series D Preferred Stock were converted into shares of our common stock, and no shares of Series D Preferred Stock remain outstanding.

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Results of Operations

Year Ended December 31, 2013 (As Adjusted) Compared to Year Ended December 31, 2012 (As Adjusted)

Our total net revenues of $549.2 million for 2013 increased $22.9 million, or 4%, compared to total net revenues for 2012. Our overall gross profit percentage for 2013 was 35%, as adjusted, compared to 2012's gross profit percentage of 41%, as adjusted. Total operating expenses, as adjusted, as a percentage of net revenues for 2013 and 2012 were 24% and 25%, respectively. During 2013, income from operations, as adjusted, of $59.1 million compared to $87.4 million, as adjusted, for 2012. Net loss for 2013 was $251.9 million, or $(1.59) per share, compared to net income of $62.0 million, or $0.39 per diluted share for 2012. As noted above, 2013 included restructuring and other charges totaling $271.2 million, impacting our diluted earnings per share by $1.71.

Net Revenues, Gross Profits and Gross Margins (As Adjusted)

Solutions — Net revenues for 2013 increased by $36.1 million, or 10%, to $387.4 million, compared to $351.3 million for 2012. This increase was primarily driven by a large increase in our data library sales and nominal increases in new ventures and data processing revenues. Sales in the fourth quarter of 2013 of $166.1 million, or 43% of total annual Solutions revenues for 2013, increased primarily due to a significant increase in data library sales, mainly relating to offshore East and West Africa, East and West India and the Gulf of Mexico. Sales are typically higher in the fourth quarter of each year compared to the prior three quarters. Gross profit decreased by $16.4 million to $116.6 million, as adjusted, representing a 30% gross margin, compared to $133.0 million, or a 38% gross margin, for 2012. This decrease was attributable to (i) cost overruns on our 3-D marine program during the first half of 2013 and (ii) the negative impact of approximately $15 million of unrecorded revenues tied to a customer contract that was pending final execution at the end of 2013.

Systems — Net revenues for 2013 decreased by $9.6 million, or 7%, to $122.4 million, compared to $132.0 million for 2012. Fourth quarter 2013 sales accounted for $40.5 million, or 33%, of total annual Systems revenues for 2013. Sales in the fourth quarter of each year typically account for the largest share of sales each year. This decrease in revenues in 2013 was principally due to reduced demand from the shrinking marketplace and spare capacity in the industry resulting from recent further consolidation of marine geophysical contractors; these conditions contributed to a decrease in sales of new towed streamer systems. This decrease was partially offset by increasing levels of repair work from the existing installed product base with our customers. Gross profit for 2013 decreased by $6.4 million to $45.7 million, as adjusted, representing a 37% gross margin, compared to $52.1 million, as adjusted, representing a 39% gross margin, for 2012. The decrease in gross profit was due to the change in revenues, as described above.

Software — Net revenues for 2013 decreased by $3.7 million, or 9%, to $39.4 million, compared to $43.1 million for 2012. This decrease in revenues was due in part to decreased revenues from our Gator seabed software and declines in our Orca towed streamer software revenues. The reduction in revenues for seabed software was due primarily to our previous customer, RXT, filing for bankruptcy in June 2013. The declines in towed streamer software revenues were due to continuing consolidation in the towed streamer contractor sector. Gross profit for 2013 decreased by $3.9 million to $28.2 million, representing a 72% gross margin, compared to $32.1 million, for 2012, which represented a 74% gross margin.

Operating Expenses (As Adjusted)

The following table presents the "As Adjusted" operating expenses in both 2013 and 2012, excluding special charges that resulted from the 2013 restructuring and other 2013 and 2012 write-downs (in thousands):

	Year Ended December 31, 2013			Year Ended December 31, 2012		
	As Reported	Special Items[1]	As Adjusted	As Reported	Special Items[2]	As Adjusted
Operating expenses:						
Research, development and engineering	$37,742	$(1,388)	$36,354	$34,080	$—	$34,080
Marketing and sales	38,583	(277)	38,306	35,240	—	35,240
General, administrative and other operating expenses	66,592	(9,854)	56,738	71,954	(11,568)	60,386

Total operating expenses	$142,917	$(11,519)	$131,398	$141,274	$(11,568)	$129,706
Income from operations	$16,396	$42,668	$59,064	$74,527	$12,848	$87,375

(1) Represents severance-related charges as a result of a restructuring of the Systems segment and the write-down of the carrying value of receivables due from OceanGeo.

(2) Represents the write-down of marine equipment and receivables within the Systems segment in 2012.

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Research, Development and Engineering — Research, development and engineering expense was $36.4 million, as adjusted, or 7% of net revenues, for 2013, an increase of $2.3 million compared to $34.1 million, or 6% of net revenues, for 2012. This increase in research and development expense was primarily due to increased investment of labor and technology related to product development. During 2013, we continued to invest in Calypso, our next generation re-deployable OBS data acquisition system and Narwhal, our ice management system for operations in harsh Arctic environments.

Marketing and Sales — Marketing and sales expense of $38.3 million, as adjusted, or 7% of net revenues, for 2013, increased $3.1 million compared to $35.2 million, or 7% of net revenues, for 2012. This increase in marketing and sales expense was primarily due to investment in our Solutions sales teams to support the continued growth in the Solutions segment.

General, Administrative and Other Operating Expenses — General, administrative and other operating expenses of $56.7 million, as adjusted, for 2013 decreased $3.6 million compared to $60.4 million, as adjusted, for the corresponding period of 2012. General, administrative and other operating expenses as a percentage of net revenues for 2013 and 2012 were 10% and 11%, respectively. This decrease was primarily related to the lower levels of legal costs incurred during 2013 compared to those incurred in connection with the WesternGeco trial in 2012. See further discussion at Part I, Item 3. “Legal Proceedings.”

Other Items

Interest Expense, net — Interest expense, net, of $12.3 million for 2013 increased compared to $5.3 million for 2012. This increase is directly related to the issuance of the Notes in May 2013, which carry a higher interest rate and represent a greater principal amount outstanding, than do the interest rate and the average outstanding balance of indebtedness under our revolving line of credit, which was our only major indebtedness outstanding in 2012. For additional information, please refer to “— Liquidity and Capital Resources — Sources of Capital” below.

Equity in Earnings (Losses) of Investments — In 2013 and 2012, we accounted for our investments in both INOVA Geophysical and OceanGeo as equity method investments.

We record our share of earnings and losses of our 49% interest in INOVA Geophysical on a one fiscal quarter lag basis. Thus, our share of INOVA Geophysical’s earnings (losses) for the periods from October 1, 2012 to September 30, 2013 (“Fiscal 2013”) and from October 1, 2011 to September 30, 2012 (“Fiscal 2012”) were included in our consolidated financial results for fiscal 2013 and fiscal 2012, respectively. For 2013, we recorded our 49% share of equity in INOVA Geophysical’s losses of approximately $22.5 million (including $18.8 million representing our share of several restructuring charges and write-downs of excess and obsolete inventory). For 2012, we recorded our 49% share in INOVA Geophysical’s earnings of approximately $0.3 million.

The following table reflects the summarized financial information for INOVA Geophysical for Fiscal 2013 and Fiscal 2012 (in thousands):

	Fiscal 2013		Fiscal 2012
Total net revenues	$183,619		$188,336
Gross profit (loss)	$(1,988)	[1]	$39,320
Income (loss) from operations	$(44,463)		$3,241
Net income (loss)	$(46,149)	[1]	$2,197

(1) Impacting INOVA Geophysical's gross profit in Fiscal 2013, is $36.5 million of restructuring and special items associated with the impairment of intangible assets, write-down of excess and obsolete inventory and rental equipment, and severance-related charges. In addition to the restructuring and special items impacting gross profit, net income (loss) was also impacted by $1.8 million of other restructuring and special items.

In 2013, we accounted for our 30% interest in OceanGeo as an equity method investment and recorded our share of earnings of OceanGeo on a current quarter basis. In 2013, we recorded our share of equity in OceanGeo’s losses of approximately $19.8 million. OceanGeo’s losses were related to idle activity prior to them mobilizing in late December 2013.

Other Income (Expense) — Other expense for 2013 was $182.5 million compared to other income of $17.1 million for 2012. The difference primarily relates to the settlements of litigation and the accrual for loss contingency related to a legal matter. See further discussion at Part 1, Item 3, “Legal Proceedings.”

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The following table reflects the significant items of other income (expense) (in thousands):

	Years Ended December 31,	
	2013	2012
Accrual for loss contingency related to legal proceedings (Footnote 17)	$(183,327)	$(10,000)
Gain on sale of a cost method investment	3,591	—
Gain on legal settlement[1]	—	30,895
Other income (expense)	(2,794)	(3,771)
Total other income (expense)	$(182,530)	$17,124

[1] Gain related to the 2012 settlement of a patent infringement lawsuit with Sercel.

Income Tax Expense — Income tax expense for 2013 was $25.7 million compared to $23.9 million for 2012. Our effective tax rates for 2013 and 2012 were (11.6)% and 27.5%, respectively. The change in our effective tax rate between 2013 and 2012 was due to the establishment during 2013 of an additional valuation allowance on U.S. federal net deferred tax assets and nondeductible equity losses related to OceanGeo and INOVA Geophysical. Our effective tax rate for 2013, excluding changes in the valuation allowance, was 28.3%. We currently maintain a valuation allowance on substantially all net deferred tax assets.

Liquidity and Capital Resources

Sources of Capital

As of December 31, 2014, we had $173.6 million in cash on hand. As of December 31, 2014, we have approximately $68.2 million available under the New Credit Facility. Our cash requirements include our working capital requirements and cash required for our debt service payments, multi-client seismic data acquisition activities and capital expenditures. As of December 31, 2014, we had working capital of $222.1 million. Working capital requirements are primarily driven by our continued investment in our multi-client data library ($67.8 million in 2014) and, to a lesser extent, our inventory purchase obligations. At December 31, 2014, our outstanding inventory purchase obligations were $14.3 million. Also, our headcount has traditionally been a significant driver of our working capital needs. Because a significant portion of our business is involved in the planning, processing and interpretation of seismic data services, one of our largest investments is in our employees, which involves cash expenditures for their salaries, bonuses, payroll taxes and related compensation expenses.

Our working capital requirements may change from time to time depending upon many factors, including our operating results and adjustments in our operating plan required in response to industry conditions, competition, acquisition opportunities and unexpected events, such as a requirement to collateralize the appeal bond for our ongoing WesternGeco litigation or to satisfy an adverse outcome in the litigation, which is further discussed at Part I, Item 3. “Legal Proceedings.” In recent years, our primary sources of funds have been cash flows generated from our operations, our existing cash balances, debt and equity issuances and borrowings under our revolving credit facilities.

New Credit Facility, including Revolving Line of Credit — In August 2014, we entered into a new credit facility with PNC Bank, National Association (the “New Credit Facility”), that replaced our prior credit facility under a credit agreement dated as of March 25, 2010, as amended, by and among ION, the subsidiary guarantors that are parties thereto and China Merchants Bank Co., Ltd., New York Branch, as administrative agent and lender (the “Prior Credit Facility”).

Our New Credit Facility contemplates maximum credit facilities of up to $175.0 million in the aggregate with current commitments being subject to a borrowing base. Under our New Credit Facility, the lenders have currently committed $80.0 million of revolving credit, subject to a borrowing base. As of December 31, 2014, we have approximately $68.2 million available under the New Credit Facility. The amount available will increase or decrease monthly as our borrowing base changes. The borrowing base for revolving credit borrowings under the New Credit Facility is calculated using a formula based on certain eligible receivables, eligible inventory and other amounts. The interest rate on revolving credit borrowings under the New Credit Facility will be, at our option, (i) an alternate base rate equal to the highest of (a) the prime rate of PNC, (b) a federal funds effective rate plus 0.50% or (c) a LIBOR-based rate plus 1.0%, plus an applicable interest margin, or (ii) a LIBOR-based rate, plus an applicable interest margin. The revolving credit indebtedness under the New Credit Facility is scheduled to mature on the earlier of (x) August 22,

2019 or (y) the date which is 90 days prior to the maturity date of the Notes (or such later due date if the Notes have been refinanced). As of December 31, 2014, there was no outstanding indebtedness under the New Credit Facility. The New Credit Facility requires us to maintain compliance with various covenants. At December 31, 2014, we were in compliance with all of the covenants under the New Credit Facility. For further information regarding our New Credit Facility, see Footnote 6 “Long-term Debt and Lease Obligations” of Footnotes to Consolidated Financial Statements.

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Senior Secured Second-Priority Notes — In May 2013, we sold $175.0 million aggregate principal amount of 8.125% Senior Secured Second-Priority Notes due 2018 in a private offering. The Notes are senior secured second-priority obligations, are guaranteed by our material U.S. subsidiaries: GX Technology Corporation, ION Exploration Products (U.S.A.), Inc. and I/O Marine Systems, Inc. ("the Notes Guarantors"), and mature on May 15, 2018. Interest on the Notes accrues at the rate of 8.125% per annum and is payable semiannually in arrears on May 15 and November 15 of each year during their term. In May 2014, the holders of the Notes exchanged their Notes for a like principal amount of registered Notes with the same terms.

On or after May 15, 2015, we may on one or more occasions redeem all or a part of the Notes at the redemption prices set forth below, plus accrued and unpaid interest and special interest, if any, on the Notes redeemed during the twelve-month period beginning on May 15th of the years indicated below:

Date	Percentage
2015	104.063%
2016	102.031%
2017 and thereafter	100.000%

The Indenture governing the Notes requires us to maintain compliance with various covenants. At December 31, 2014, we were in compliance with all of the covenants under the Indenture. For further information regarding the Notes, see Footnote 6 "Long-term Debt and Lease Obligations" of Footnotes to Consolidated Financial Statements. For additional information regarding the terms of the Notes and related Indenture and Intercreditor Agreement, see our Current Report on Form 8-K filed with the SEC on May 13, 2013.

Meeting our Liquidity Requirements

As of December 31, 2014, our total outstanding indebtedness (including capital lease obligations) was approximately $190.6 million, consisting primarily of approximately $175.0 million outstanding Notes and $15.1 million of capital leases. As of December 31, 2014, there was no outstanding indebtedness under our New Credit Facility.

For 2014, total capital expenditures, including investments in our multi-client data library, were $76.0 million. We currently expect that our capital expenditures, including investments in our multi-client data library, will be reduced in 2015 compared to 2014. However, we do not expect to finalize our annual budget until such time that our E&P customers finalize their exploration budgets for 2015. The 2015 budgeting process by our E&P customers has been delayed due to the rapid decline in crude oil prices during the fourth quarter of 2014 and into early 2015, as described in "Executive Summary - Macroeconomic Conditions" above. For 2015, we have operating lease commitments of approximately $19.9 million for two seismic vessels leased by OceanGeo for use in OBS data acquisition services. Subject to a requirement to collateralize the appeal bond for our ongoing WesternGeco litigation or to satisfy a payment obligation in the amount of the loss contingency we have established with respect to the litigation, we currently believe that our existing cash, cash generated from operations, our sources of working capital, and our New Credit Facility will be sufficient for us to meet our anticipated cash needs for the foreseeable future. However, as set forth below, a requirement to collateralize the appeal bond or to satisfy a payment obligation with respect to the WesternGeco litigation could have a material adverse effect on our liquidity and, as a result, our business, financial condition and results of operations.

Loss Contingency — WesternGeco Lawsuit

As of December 31, 2014, we have a loss contingency of $123.8 million accrued related to the legal proceedings with WesternGeco. As described at Part I, Item 3. "Legal Proceedings," there are possible scenarios involving an outcome in the WesternGeco lawsuit that could materially and adversely affect our liquidity. In connection with our appeal of the trial court judgment, we arranged with sureties to post an appeal bond on our behalf in the amount of $120.0 million. The terms of the appeal bond arrangements provide the sureties the contractual right for as long as the bond is outstanding to require us to post cash collateral for up to the full amount of the bond. If the sureties exercise their right to require collateral while the appeal bond is outstanding, we intend to utilize a combination of cash on hand and undrawn balances available under our New Credit Facility. Any requirements that we collateralize the appeal bond will reduce our liquidity and may reduce the amount otherwise available to be borrowed under our New Credit Facility. If we are required to collateralize the full amount of the bond, we might also seek additional debt and/or equity financing. No assurances can be made whether our efforts to raise additional cash would be successful and, if

so, on what terms and conditions, and at what cost we might be able to secure any such financing. If additional funds are raised through the issuance of debt and/or equity securities, these securities could have rights, preferences and privileges less favorable to us than our current debt or equity securities, and the terms of these securities could impose further restrictions on our operations.

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If we are unable to raise additional capital under these circumstances or if our efforts on appeal to reverse or reduce the verdict substantially are unsuccessful, it would likely have the effect of reducing our capital resources available to fund our operations and take advantage of certain business opportunities (including the ability to fund investments in our multi-client data library, research and development, and future acquisition opportunities), which could have a material adverse effect on our business, results of operations and financial condition.

We may not ultimately prevail in the appeals process and we could be required to pay damages up to the amount of the loss contingency accrual plus any additional amount ordered by the court. Our assessment of our potential loss contingency may change in the future due to developments at the appellate court and other events, such as changes in applicable law, and such reassessment could lead to the determination that no loss contingency is probable or that a greater loss contingency is probable, which could have a material effect on our business, financial condition and results of operations. Amounts of estimated loss contingency accruals as 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 exceed or be considerably less than these accrual amounts.

Cash Flow from Operations

Net cash provided by operating activities was $129.8 million for 2014, compared to $147.6 million for 2013. The decrease in our cash flows from operations was primarily due to lower revenues in 2014 compared to 2013, partially offset by lower levels of accounts receivable and unbilled receivables.

Net cash provided by operating activities was $147.6 million for 2013, compared to $169.1 million of net cash provided by operating activities in 2012. The negative effects caused by the 2013 net loss to our cash flow from operations were partially offset by non-cash special charges taken during 2013 for write-downs of inventory, certain receivables and certain data library projects, our equity method investment losses in OceanGeo and INOVA Geophysical and the additional accruals for loss contingencies related to the WesternGeco lawsuit. Positively affecting our 2013 net cash flows from operations were lower levels of outstanding unbilled receivables for 2013, partially offset by an investment in inventory and higher accounts receivable at December 31, 2013.

Cash Flow Used In Investing Activities

Net cash flow used in investing activities was $48.8 million for 2014, compared to $159.0 million for 2013. The principal uses of cash in our investing activities during 2014 were $67.8 million of continued investments in our multi-client data library, $8.3 million of investments in property, plant and equipment and investments in and cash advances to OceanGeo totaling $3.1 million, offset by $14.4 million of net proceeds from the sale of a product line and $14.1 million of net proceeds from the sale of a cost method investment.

Net cash flow used in investing activities was $159.0 million for 2013, compared to net cash used in investing activities of $144.3 million for 2012. The principal uses of cash in our investing activities during 2013 were $114.6 million of continued investments in our multi-client data library, $24.8 million of cash invested in and advanced to OceanGeo, and $16.9 million invested in property, plant and equipment.

Cash Flow from Financing Activities

Net cash flow used in financing activities was $56.0 million for 2014, compared to $98.7 million of net cash flow provided by financing activities for 2013. The net cash flow used in financing activities during 2014 was primarily related to the $35.0 million of net repayments on our Prior Credit Facility, $13.0 million of payments on long-term debt, and $6.0 million to purchase the remaining interest in OceanGeo.

Net cash flow provided by financing activities was $98.7 million for 2013, compared to $6.5 million of net cash flow used in financing activities for 2012. The net cash flow provided by financing activities during 2013 was primarily related to our issuance of $175.0 million principal amount of the Notes. We also drew $35.0 million of net borrowings under our revolving line of credit during 2013. Offsetting these cash provisions were our total repayments under of our revolving line of credit during 2013 of $97.3 million. In 2013, we also paid $1.4 million in cash dividends on our outstanding Series D Preferred Stock and an additional $5.0 million with respect to the Series D Preferred Stock when it was converted in September 2013. The $6.5 million of net cash flow used in financing activities during 2012 was primarily related to repayment of an outstanding term loan of $98.3 million, offset by net borrowings under our amended revolving line of credit of $97.3 million. We also paid $1.4 million in cash dividends on our outstanding Series D Preferred Stock in 2012.

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Inflation and Seasonality

Inflation in recent years has not had a material effect on our costs of goods or labor, or the prices for our products or services. Traditionally, our business has been seasonal, with strongest demand typically in the fourth quarter of our fiscal year. We experienced increased demand in the fourth quarter of 2013 driven by increased capital expenditures from our E&P customers, consistent with our historical seasonality. However, sales in 2014 have been negatively impacted by reduced exploration spending by our E&P customers.

Future Contractual Obligations

The following table sets forth estimates of future payments of our consolidated contractual obligations, as of December 31, 2014 (in thousands):

Contractual Obligations	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Long-term debt	$175,535	$ 535	$—	$175,000	$ —
Interest on long-term debt obligations	51,030	15,259	29,839	5,932	—
Equipment capital lease obligations	15,059	7,114	7,945	—	—
Operating leases	111,055	29,604	20,947	17,538	42,966
Purchase obligations	14,331	14,331	—	—	—
Total	$367,010	$ 66,843	$58,731	$198,470	$ 42,966

The long-term debt at December 31, 2014 included $175.0 million of principal amount of indebtedness outstanding under our Notes issued in May 2013. The $15.1 million of equipment capital lease obligations relates to GXT's financing of computer and other equipment purchases.

The operating lease commitments at December 31, 2014 relate to our leases for certain equipment, offices, processing centers, warehouse space and seismic vessels under non-cancelable operating leases. Our purchase obligations primarily relate to our committed inventory purchase orders under which deliveries of inventory are scheduled to be made in 2015.

Critical Accounting Policies and Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States requires management to make choices between acceptable methods of accounting and to use judgment in making estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and the reported amounts of revenue and expenses. The following accounting policies are based on, among other things, judgments and assumptions made by management that include inherent risk and uncertainties. Management's estimates are based on the relevant information available at the end of each period. We believe that all of the judgments and estimates used to prepare our financial statements were reasonable at the time we made them, but circumstances may change requiring us to revise our estimates in ways that could be materially adverse to our results of operations and financial condition. We describe our significant accounting policies more fully in Footnote 1 "Summary of Significant Accounting Policies" of Footnotes to Consolidated Financial Statements.

Revenue Recognition

We derive revenue from the sale of (i) multi-client and proprietary surveys, licenses of "on-the-shelf" data libraries and imaging services, within our Solutions segment; (ii) seismic data acquisition systems and other seismic equipment within our Systems segment; (iii) seismic command and control software systems and software solutions for operations management within our Software segment; and (iv) fully-integrated OBS solutions that include survey design and planning and data acquisition within our Ocean Bottom Services segment. All revenues of the Solutions and Ocean Bottom Services segments and the services component of revenues for the Software segment are classified as services revenues. All other revenues are classified as product revenues.

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Multi-Client and Proprietary Surveys, Data Libraries and Imaging Services — As our multi-client surveys are being designed, acquired or processed (referred to as the "new venture" phase), we enter into non-exclusive licensing arrangements with our 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, we recognize 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; and (d) no significant uncertainty exists as to the customer's obligation, willingness or ability to pay. In limited situations, we have provided the customer with a right to exchange seismic data for another specific seismic data set. In these limited situations, we recognize revenue at the earlier of the customer exercising its exchange right or the expiration of the customer's exchange right.

We also perform seismic surveys under contracts to specific customers, whereby the seismic data is owned by those customers. We recognize revenue as the seismic data is acquired and/or processed on a proportionate basis as work is performed. We use quantifiable measures of progress consistent with our multi-client surveys.

Revenues from all imaging and other services are recognized when persuasive evidence of an arrangement exists, the price is fixed or determinable, and collectibility 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 seismic data acquisition systems and other seismic equipment, we follow the requirements of ASC 605-10 "Revenue Recognition" and recognize revenue when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility 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, we follow the requirements for these transactions of ASC 985-605 "Software Revenue Recognition" ("ASC 985-605"). We recognize 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) collectibility 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 us providing related services, such as training courses, engineering services and annual software maintenance. We allocate 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, we apply the residual method.

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

Ocean Bottom Services — We recognize revenues as they are realized and earned and can be reasonably measured, based on contractual dayrates or on a fixed-price basis, and when collectability is reasonably assured. In connection with acquisition contracts, we may receive revenues for preparation and mobilization of equipment and personnel or for capital improvements to vessels. We defer the revenues earned and incremental costs incurred that are directly related to contract preparation and mobilization and recognize such revenues and costs over the primary contract term of the acquisition project. We use 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. We recognize the costs of relocating vessels without contracts to more promising market sectors as such costs are incurred. Upon completion of acquisition contracts, we recognize 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, we follow the requirements of ASC 605-25 “Accounting for Multiple-Element Revenue Arrangement” (“ASC 605-25’). We adopted this guidance as of January 1, 2010, and applied the guidance to transactions initiated or materially modified on or after January 1, 2010. The guidance does not apply to software sales accounted for under ASC 985-605. We also adopted, in the same period, guidance within ASC 985-605 that excludes from its scope revenue arrangements that include both tangible products and software elements, such that the tangible products contain both software and non-software components that function together to deliver the tangible product’s essential functionality.

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This guidance requires that arrangement consideration be allocated at the inception of an arrangement to all deliverables using the relative selling price method. We allocate arrangement consideration to each deliverable qualifying as a separate unit of accounting in an arrangement based on its relative selling price. We determine selling price using VSOE, if it exists, and otherwise, third-party evidence ("TPE"). If neither VSOE nor TPE of selling price exists for a unit of accounting, we use estimated selling price ("ESP"). We generally expect that we will not be able to establish TPE due to the nature of the markets in which we compete, and, as such, we typically will determine 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 we can determine VSOE for the product.

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

Multi-Client Data Library

Our multi-client data library consists of seismic surveys that are offered for licensing to customers on a non-exclusive basis. The capitalized costs include the 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 2014, 2013 and 2012, we capitalized, as part of our multi-client data library, $8.3 million, $2.1 million and $3.8 million, respectively, of direct internal processing costs.

Our method of amortizing the costs of an in-process multi-client data library (the period during which the seismic data is being acquired 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). We consider 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 completed, the data survey is considered "on-the-shelf" and our 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, we first record 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 the accumulated amortization being equal to the cumulative straight-line amortization for that survey. We have determined the amortization period to be four years based upon our historical experience that indicates that the majority of our revenues from multi-client surveys are derived during the acquisition and processing phases and during the four years subsequent to survey completion.

Estimated sales are determined based upon discussions with our customers, our experience and our knowledge of industry trends. Changes in sales estimates may have the effect of changing the percentage relationship of cost of services to revenue. In applying the sales forecast method, an increase in the projected sales of a survey will result in lower cost of services as a percentage of revenue and higher earnings when revenue associated with that particular survey is recognized, while a decrease in projected sales will have the opposite effect. Assuming that the overall volume of sales mix of surveys generating revenue in the period was held constant in 2014, an increase of 10% in the sales forecasts of all surveys would have decreased our amortization expense by approximately $5.9 million.

We estimate 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 us at the project's initiation. For a completed multi-client survey, we review the estimate quarterly. If during any such review, we determine that the ultimate revenue for a survey is expected to be materially more or less than the

original estimate of total revenue for such survey, we decrease or increase (as the case may be) the amortization rate attributable to the future revenue from such survey. In addition, in connection with such reviews, we evaluate the recoverability of the multi-client data library, and if required under ASC 360-10 “Impairment and Disposal of Long-Lived Assets,” record an impairment charge with respect to such data. In 2014, we wrote down our multi-client data library by $100.1 million due to current market conditions. For a full discussion of impairments of our multi-client data library in 2014 and 2013, see Footnote 2 “Impairments, Restructurings and Other Charges” of Footnotes to Consolidated Financial Statements included elsewhere in this Form 10-K for additional information. There were no significant impairment charges during 2012.

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Reserve for Excess and Obsolete Inventories

Our reserve for excess and obsolete inventories is based on historical sales trends and various other assumptions and judgments, including future demand for our inventory, the timing of market acceptance of our new products and the risk of obsolescence driven by new product introductions. When we record a charge for excess and obsolete inventories, the amount is applied as a reduction in the cost basis of the specific inventory item for which the charge was recorded. Should these assumptions and judgments not be realized for these or for other reasons, our reserve would be adjusted to reflect actual results. Our industry is subject to technological change and new product development that could result in obsolete inventory. Our reserve for inventory at December 31, 2014 was $29.8 million compared to $32.6 million at December 31, 2013.

Goodwill and Other Intangible Assets

Goodwill is allocated to our reporting units, which is 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”), we established the following reporting units: Solutions, Software and Marine Systems. To determine the fair value of our reporting units, we use a discounted future returns valuation method. If we had established different reporting units or utilized different valuation methodologies, our impairment test results could differ. Additionally, we compared the sum of the estimated fair values of the individual reporting units less consolidated debt to our overall market capitalization as reflected by the our stock price.

In accordance with ASC 350, we are required to evaluate the carrying value of our goodwill at least annually for impairment, or more frequently if facts and circumstances indicate that it is more likely than not impairment has occurred. We formally evaluate the carrying value of our goodwill for impairment as of December 31 for each of our reporting units. We first perform 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 is less than its carrying amount. If we are unable to conclude qualitatively that it is more likely than not that a reporting unit’s fair value exceeds its carrying value, then we will use a two-step quantitative assessment of the fair value of a reporting unit. If the carrying value of a reporting unit of an entity 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 other 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.

We completed our annual goodwill impairment testing as of December 31, 2014 and recorded a charge of $21.9 million through Income (loss) from operations. Remaining goodwill as of December 31, 2014 was comprised of $24.4 million in our Software and $2.9 million in our Solutions reporting units.

For goodwill testing purposes, the $123.8 million litigation contingency accrual is assigned to the Marine Systems reporting unit. Based on this accrual and the recording of a valuation allowance on substantially all of our net deferred tax assets, this reporting unit’s carrying value was negative as of December 31, 2014. The negative carrying value required us to perform step 2 of the impairment test on our Marine Systems reporting unit; the test determined that the goodwill associated with our Marine Systems reporting unit was fully impaired.

Our 2014 quantitative assessment indicated that the fair values of our Software and Solutions reporting units significantly exceeded their carrying values. Our analyses are based upon our internal operating forecasts, which include assumptions about market and economic conditions. However, if our estimates or related projections associated with the reporting units significantly change in the future, we may be required to record further impairment charges. If the operational results of our segments are lower than forecasted or the economic conditions are worse than expected, then the fair value of our segments will be adversely affected.

Our intangible assets, other than goodwill, relate to our customer relationships. We amortize our 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. We use 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 “Property, Plant and Equipment,” we review the carrying values of these intangible assets for impairment if events or changes in the facts and circumstances indicate that it is more likely than not 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.

Similar to our treatment of goodwill, in making these assessments, we rely on a number of factors, including operating results, business plans, internal and external economic projections, anticipated future cash flows and external market data. However, if our estimates or related projections associated with the reporting units significantly change in the future, we may be required to record further impairment charges.

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Deferred Tax Assets

During 2013 we established a valuation allowance on a substantial majority of our U.S. net deferred tax assets due to the large one time charges taken during the year. 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. We will continue to record a valuation allowance for the substantial majority of all of our deferred tax assets until there is sufficient evidence to warrant reversal. In the event our expectations of future operating results change, an additional valuation allowance may be required to be established on our existing unreserved net U.S. deferred tax assets.

Foreign Sales Risks

For 2014, we recognized $100.2 million of sales to customers in Europe, $49.9 million of sales to customers in Asia Pacific, $111.1 million of sales to customers in Latin American countries, $39.1 million of sales to customers in the Middle East, $75.5 million of sales to customers in Africa and $3.5 million of sales to customers in the Commonwealth of Independent States, or former Soviet Union (CIS). The majority of our foreign sales are denominated in U.S. dollars. For 2014, 2013 and 2012, international sales comprised 74%, 73% and 69%, respectively, of total net revenues. Since 2008, global economic problems and uncertainties have generally increased in scope and nature. In the fourth quarter of 2014, crude oil prices dropped by approximately 45%–50% as the non-U.S. economic outlook continues to weaken, North American production continues to expand, and more recently, Saudi Arabia has publicly stated its intention to support its global market share at the expense of lower prices. The decline in crude oil prices, as well as U.S. and European Union sanctions against Russia related to its actions in Ukraine, have both contributed to the devaluation of the Russian ruble putting significant pressure on our Russian-based customers and negatively impacting the appeal of seismic data located in Russia to potential non-Russian buyers. Our results of operations, liquidity and financial condition related to our operations in Russia are primarily denominated in U.S. dollars. To the extent that world events or economic conditions negatively affect our future sales to customers in many regions of the world, as well as the collectability of our existing receivables, our future results of operations, liquidity and financial condition would be adversely affected.

Off-Balance Sheet Arrangements

Variable interest entities. As of December 31, 2014, our investment in INOVA Geophysical constitutes an investment in a variable interest entity, as that term is defined in FASB ASC Topic 810-10 “Consolidation – Overall” and as defined in Item 303(a)(4)(ii) of SEC Regulation S-K. See Footnote 5 “Equity Method Investments” of Footnotes to Consolidated Financial Statements included elsewhere in this Form 10-K for additional information.

Indemnification

In the ordinary course of our business, we enter into contractual arrangements with our customers, suppliers and other parties under which we may agree to indemnify the other party to such arrangement from certain losses it incurs relating to our products or services or for losses arising from certain events as defined within the particular contract. Some of these indemnification obligations may not be subject to maximum loss limitations. Historically, payments we have made related to these indemnification obligations have been immaterial.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Market risk is the risk of loss from adverse changes in market prices and rates. Our primary market risks include risks related to interest rates and foreign currency exchange rates.

Interest Rate Risk

As of December 31, 2014, we had outstanding total indebtedness of approximately $190.6 million, including capital lease obligations. As of December 31, 2014, all of this indebtedness accrues interest at fixed interest rates.

As our borrowings under the revolving credit facility are subject to variable interest rates, we are subject to interest rate risk to the extent we have outstanding balances under the revolving credit facility. We are therefore impacted by changes in LIBOR and/or our bank's base rates. We may, from time to time, use derivative financial instruments (e.g., interest rate caps), to help mitigate rising interest rates under our credit facility. We do not use derivatives for trading or speculative purposes and only enter into contracts with major financial institutions based on their credit rating and other factors.

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Foreign Currency Exchange Rate Risk

Our operations are conducted in various countries around the world, and we receive revenue from these operations in a number of different currencies with the most significant of our international operations using British pounds sterling. As such, our earnings are subject to movements in foreign currency exchange rates when transactions are denominated in currencies other than the U.S. dollar, which is our functional currency, or the functional currency of many of our subsidiaries, which is not necessarily the U.S. dollar. To the extent that transactions of these subsidiaries are settled in currencies other than the U.S. dollar, a devaluation of these currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars.

Through our subsidiaries, we operate in a wide variety of jurisdictions, including the United Kingdom, Australia, the Netherlands, Brazil, China, Canada, Russia, the United Arab Emirates, Egypt and other countries. Our financial results may be affected by changes in foreign currency exchange rates. Our consolidated balance sheet at December 31, 2014 reflected approximately $15.3 million of net working capital related to our foreign subsidiaries, a majority of which is within the United Kingdom. Our foreign subsidiaries receive their income and pay their expenses primarily in their local currencies. To the extent that transactions of these subsidiaries are settled in the local currencies, a devaluation of these currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars. For the year ended December 31, 2014, we recorded net foreign currency losses of approximately $1.8 million in Other income (expense), a majority of these losses are due to currency losses related to our operations within Brazil, Australia and Canada, partially offset by currency gains related to our operations in the United Kingdom.

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 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

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, 2014. 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, 2014.

(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.

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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, 2014 based upon criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management excluded from its assessment the internal control over financial reporting at OceanGeo B.V. and its subsidiaries, which was acquired in January 2014 and whose financial statements reflect total assets and revenues constituting 9% and 20%, respectively, of our consolidated financial statement amounts as of and for the year ended December 31, 2014. Based upon their assessment, management concluded that the internal control over financial reporting was effective as of December 31, 2014.

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, 2014, which has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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Report of Independent Registered Public Accounting Firm

Board of Directors and Shareholders
ION Geophysical Corporation

We have audited the internal control over financial reporting of ION Geophysical Corporation (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2014, based on criteria established in the 2013 Internal Control–Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). 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 ("Management's Report"). Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

Our audit of, and opinion on, the Company's internal control over financial reporting does not include the internal control over financial reporting of OceanGeo B.V. and its subsidiaries (OceanGeo), a wholly-owned subsidiary, whose financial statements reflect total assets and revenues constituting 9 and 20 percent, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2014. As indicated in Management's Report, OceanGeo was acquired during 2014. Management's assertion on the effectiveness of the Company's internal control over financial reporting excluded internal control over financial reporting of OceanGeo.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

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.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, 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), the consolidated financial statements of the Company as of and for the year ended December 31, 2014, and our report dated February 17, 2015 expressed an unqualified opinion on those financial statements.

/s/ GRANT THORNTON LLP
Houston, Texas
February 17, 2015

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Item 9B. Other Information
Not applicable.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance

Reference is made to the information appearing in the definitive proxy statement, under “Item 1 — Election of Directors,” for our annual meeting of stockholders to be held on May 20, 2015 (the “2015 Proxy Statement”) to be filed with the SEC with respect to Directors, Executive Officers and Corporate Governance, which is incorporated herein by reference and made a part hereof in response to the information required by Item 10.

Item 11. Executive Compensation

Reference is made to the information appearing in the 2015 Proxy Statement, under “Executive Compensation,” to be filed with the SEC with respect to Executive Compensation, which is incorporated herein by reference and made a part hereof in response to the information required by Item 11.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Reference is made to the information appearing in the 2015 Proxy Statement, under “Item 1 — Ownership of Equity Securities of ION” and “Equity Compensation Plan Information,” to be filed with the SEC with respect to Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, which is incorporated herein by reference and made a part hereof in response to the information required by Item 12.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Reference is made to the information appearing in the 2015 Proxy Statement, under “Item 1 — Certain Transactions and Relationships,” to be filed with the SEC with respect to Certain Relationships and Related Transactions and Director Independence, which is incorporated herein by reference and made a part hereof in response to the information required by Item 13.

Item 14. Principal Accounting Fees and Services

Reference is made to the information appearing in the 2015 Proxy Statement, under “Principal Auditor Fees and Services,” to be filed with the SEC with respect to Principal Accountant Fees and Services, which is incorporated herein by reference and made a part hereof in response to the information required by Item 14.

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PART IV

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 dated September 24, 2007 filed on September 24, 2007 as Exhibit 3.4 to the Company’s Current Report on Form 8-K and incorporated herein 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.
3.3	—	Certificate of Ownership and Merger merging ION Geophysical Corporation with and into Input/Output, Inc. dated September 21, 2007, filed on September 24, 2007 as Exhibit 3.1 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.1	—	Certificate of Rights and Designations of Series D-1 Cumulative Convertible Preferred Stock, dated February 16, 2005 and filed on February 17, 2005 as Exhibit 3.1 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.2	—	Certificate of Elimination of Series B Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.2 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.3	—	Certificate of Elimination of Series C Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.3 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.4	—	Certificate of Designation of Series D-2 Cumulative Convertible Preferred Stock dated December 6, 2007, filed on December 6, 2007 as Exhibit 3.1 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.5	—	Certificate of Designations of Series A Junior Participating Preferred Stock of ION Geophysical Corporation effective as of December 31, 2008, filed on January 5, 2009 as Exhibit 3.1 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.6	—	Certificate of Elimination of Series A Junior Participating Preferred Stock dated February 10, 2012, filed on February 13, 2012 as Exhibit 3.1 to the Company’s Current Report on Form 8-K, and incorporated herein by reference.
4.7	—	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.
4.8	—	Registration Rights Agreement, dated May 13, 2013, among ION Geophysical Corporation, the subsidiary guarantors named therein and Citigroup Global Markets Inc. and Wells Fargo Securities, LLC, as representatives of the initial purchasers named therein, filed on May 13, 2013 as Exhibit 4.2 to the Company’s Current Report on Form 8-K and incorporated herein by reference.
4.9	—	

		Certificate of Elimination of Series D-1 Cumulative Convertible Preferred Stock dated September 30, 2013, filed on September 30, 2013 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.10	—	Certificate of Elimination of Series D-2 Cumulative Convertible Preferred Stock dated September 30, 2013, filed on September 30, 2013 as Exhibit 3.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.

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**10.1	—	Amended and Restated 1990 Stock Option Plan, filed on June 9, 1999 as Exhibit 4.2 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
10.2	—	Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park II, LP as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
10.3	—	Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park District as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
**10.4	—	Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan, filed on June 9, 1999 as Exhibit 4.3 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
**10.5	—	Amendment No. 1 to the Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan dated September 13, 1999 filed on November 14, 1999 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended August 31, 1999 and incorporated herein by reference.
**10.6	—	Input/Output, Inc. Employee Stock Purchase Plan, filed on March 28, 1997 as Exhibit 4.4 to the Company's Registration Statement on Form S-8 (Registration No. 333-24125), and incorporated herein by reference.
**10.7	—	Fifth Amended and Restated - 2004 Long-Term Incentive Plan, filed as Appendix A to the definitive proxy statement for the 2010 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 21, 2010, and incorporated herein by reference.
10.8	—	Registration Rights Agreement dated as of November 16, 1998, by and among the Company and The Laitram Corporation, filed on March 12, 2004 as Exhibit 10.7 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003, and incorporated herein by reference.
**10.9	—	Input/Output, Inc. 1998 Restricted Stock Plan dated as of June 1, 1998, filed on June 9, 1999 as Exhibit 4.7 to the Company's Registration Statement on S-8 (Registration No. 333-80297), and incorporated herein by reference.
**10.10	—	Input/Output Inc. Non-qualified Deferred Compensation Plan, filed on April 1, 2002 as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2001, and incorporated herein by reference.
**10.11	—	Input/Output, Inc. 2000 Restricted Stock Plan, effective as of March 13, 2000, filed on August 17, 2000 as Exhibit 10.27 to the Company's Annual Report on Form 10-K for the fiscal year ended May 31, 2000, and incorporated herein by reference.
**10.12	—	Input/Output, Inc. 2000 Long-Term Incentive Plan, filed on November 6, 2000 as Exhibit 4.7 to the Company's Registration Statement on Form S-8 (Registration No. 333-49382), and incorporated by reference herein.
**10.13	—	Employment Agreement dated effective as of March 31, 2003, by and between the Company and Robert P. Peebler, filed on March 31, 2003 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.14	—	First Amendment to Employment Agreement dated September 6, 2006, between Input/Output, Inc. and Robert P. Peebler, filed on September 7, 2006, as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.15	—	Second Amendment to Employment Agreement dated February 16, 2007, between Input/Output, Inc. and Robert P. Peebler, filed on February 16, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.

**10.16	—	Third Amendment to Employment Agreement dated as of August 20, 2007 between Input/Output, Inc. and Robert P. Peebler, filed on August 21, 2007 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.17	—	Fourth Amendment to Employment Agreement, dated as of January 26, 2009, between ION Geophysical Corporation and Robert P. Peebler, filed on January 29, 2009 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.18	—	Employment Agreement dated effective as of June 15, 2004, by and between the Company and David L. Roland, filed on August 9, 2004 as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.
**10.19	—	GX Technology Corporation Employee Stock Option Plan, filed on August 9, 2004 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.

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10.20	—	Concept Systems Holdings Limited Share Acquisition Agreement dated February 23, 2004, filed on March 5, 2004 as Exhibit 2.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.21	—	Registration Rights Agreement by and between ION Geophysical Corporation and 1236929 Alberta Ltd. dated September 18, 2008, filed on November 7, 2008 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q and incorporated herein by reference.
**10.22	—	Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — Concept Systems Employment Inducement Stock Option Program, filed on July 27, 2004 as Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Reg. No. 333-117716), and incorporated herein by reference.
**10.23	—	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.
**10.24	—	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.
**10.25	—	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.
**10.26	—	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.
10.27	—	Canadian Master Loan and Security Agreement dated as of June 29, 2009 by and among ICON ION, LLC, as lender, ION Geophysical Corporation and ARAM Rentals Corporation, a Nova Scotia corporation, filed on August 6, 2009 as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
10.28	—	Master Loan and Security Agreement (U.S.) dated as of June 29, 2009 by and among ICON ION, LLC, as lender, ION Geophysical Corporation and ARAM Seismic Rentals, Inc., a Texas corporation, filed on August 6, 2009 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
10.29	—	Registration Rights Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation filed on March 1, 2010 as Exhibit 10.54 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference.
10.30	—	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.
10.31	—	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.
10.32	—	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.
10.33	—	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.
**10.34	—	

		Fifth Amendment to Employment Agreement dated June 1, 2010, between ION Geophysical Corporation and Robert P. Peebler, filed on June 1, 2010 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.35	—	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.
**10.36	—	Employment Agreement dated effective as of November 28, 2011, between ION Geophysical Corporation and Gregory J. Heinlein, filed on December 1, 2011 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.

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**10.37	—	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.
**10.38	—	Consulting Services Agreement dated January 1, 2013, between ION Geophysical Corporation and The Peebler Group LLC, filed on January 4, 2013 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.39	—	2013 Long-Term Incentive Plan, filed as Exhibit 1 to the definitive proxy statement for the 2013 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 16, 2013, and incorporated herein by reference.
10.40	—	Purchase Agreement, dated May 8, 2013, among ION Geophysical Corporation, the subsidiary guarantors named therein and Citigroup Global Markets Inc. and Wells Fargo Securities, LLC, as representatives of the initial purchasers named therein, filed on May 13, 2013 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
10.41	—	Second Lien Intercreditor Agreement by and among China Merchants Bank Co., Ltd., New York Branch, as administrative agent, first lien representative for the first lien secured parties and collateral agent for the first lien secured parties, Wilmington Trust Company, National Association, as trustee and second lien representative for the second lien secured parties, and U.S. Bank National Association, as collateral agent for the second lien secured parties, and acknowledged and agreed to by ION Geophysical Corporation and the other grantors named therein, filed on May 13, 2013 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
10.42	—	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.
**10.43	—	Transition and Separation Agreement dated effective as of October 30, 2014, by and between ION Geophysical Corporation and Gregory J. Heinlein.
**10.44	—	Employment Agreement dated effective as of November 13, 2014, between ION Geophysical Corporation and Steve Bate.
*21.1	—	Subsidiaries of the Company.
*23.1	—	Consent of Grant Thornton LLP.
*23.2	—	Consent of Ernst & Young LLP.
*24.1	—	The Power of Attorney is set forth on the signature page hereof.
25.1	—	Registration Statement (Form S-4 No. 333-194110) of ION Geophysical Corporation, and incorporated herein by reference.
*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	—	The following materials are formatted in Extensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets at December 31, 2014 and 2013, (ii) Consolidated Statements of Operations for the years ended December 31, 2014, 2013 and 2012, (iii) Comprehensive Income (Loss) for the years ended December 31, 2014, 2013 and 2012, (iv) Consolidated Statements of

Cash Flows for the years ended December 31, 2014, 2013 and 2012, (v) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2014, 2013 and 2012, (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 17, 2015.

ION GEOPHYSICAL CORPORATION

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

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints R. Brian Hanson and Jamey S. Seely and each of them, as his or her true and lawful attorneys-in-fact and agents with full power of substitution and re-substitution for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all documents relating to the Annual Report on Form 10-K for the year ended December 31, 2014, including any and all amendments and supplements thereto, and to file the same with all exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully as to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Name	Capacities	Date
/S/ R. BRIAN HANSON R. Brian Hanson	President, Chief Executive Officer and Director (Principal Executive Officer)	February 17, 2015
/S/ STEVEN A. BATE Steven A. Bate	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 17, 2015
/S/ SCOTT SCHWAUSCH Scott Schwausch	Vice President and Corporate Controller (Principal Accounting Officer)	February 17, 2015
/S/ JAMES M. LAPEYRE, JR. James M. Lapeyre, Jr.	Chairman of the Board of Directors and Director	February 17, 2015
/S/ DAVID H. BARR David H. Barr	Director	February 17, 2015
/S/ HAO HUIMIN Hao Huimin	Director	February 17, 2015

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Name	Capacities	Date
/S/ MICHAEL C. JENNINGS Michael C. Jennings	Director	February 17, 2015
/S/ FRANKLIN MYERS Franklin Myers	Director	February 17, 2015
/S/ S. JAMES NELSON, JR. S. James Nelson, Jr.	Director	February 17, 2015
/S/ JOHN N. SEITZ John N. Seitz	Director	February 17, 2015

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
ION Geophysical Corporation

We have audited the accompanying consolidated balance sheet of ION Geophysical Corporation (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2014, and the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for the year ended December 31, 2014. Our audit of the basic consolidated financial statements included the financial statement schedule listed in the index appearing under 15(a). These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and the financial statement schedule based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of ION Geophysical Corporation and subsidiaries as of December 31, 2014, and the results of their operations and their cash flows for the year ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2014, 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 17, 2015 expressed an unqualified opinion thereon.

/s/ GRANT THORNTON LLP
Houston, Texas
February 17, 2015

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of ION Geophysical Corporation and Subsidiaries

We have audited the accompanying consolidated balance sheet of ION Geophysical Corporation and subsidiaries as of December 31, 2013, and the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholders' equity for each of the two years in the period ended December 31, 2013. Our audits also included the financial statement schedule for each of the two years in the period ended December 31, 2013 listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of ION Geophysical Corporation and subsidiaries at December 31, 2013, and the consolidated results of their operations and their cash flows for each of the two years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ Ernst & Young LLP

Houston, Texas

February 24, 2014

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ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2014	2013
	(In thousands, except share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$173,608	$148,056
Accounts receivable, net	114,325	149,448
Unbilled receivables	22,599	49,468
Inventories	51,162	57,173
Prepaid expenses and other current assets	13,662	24,772
Total current assets	375,356	428,917
Deferred income tax asset	8,604	14,650
Property, plant, equipment and seismic rental equipment, net	69,840	46,684
Multi-client data library, net	118,669	238,784
Equity method investments	—	53,865
Goodwill	27,388	55,876
Intangible assets, net	6,788	11,247
Other assets	10,612	14,648
Total assets	$617,257	$864,671
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current maturities of long-term debt	$7,649	$5,906
Accounts payable	36,863	22,654
Accrued expenses	65,264	84,358
Accrued multi-client data library royalties	35,219	46,460
Deferred revenue	8,262	20,682
Total current liabilities	153,257	180,060
Long-term debt, net of current maturities	182,945	214,246
Other long-term liabilities	143,804	210,602
Total liabilities	480,006	604,908
Redeemable noncontrolling interest	1,539	1,878
Commitments and contingencies		
Equity:		
Common stock, $0.01 par value; authorized 200,000,000 shares; outstanding 164,484,095 and 163,737,757 shares at December 31, 2014 and 2013, respectively, net of treasury stock	1,645	1,637
Additional paid-in capital	887,749	879,969
Accumulated deficit	(734,409)	(606,157)
Accumulated other comprehensive loss	(12,807)	(11,138)
Treasury stock, at cost, 849,539 shares at both December 31, 2014 and 2013	(6,565)	(6,565)
Total stockholders' equity	135,613	257,746
Noncontrolling interests	99	139
Total equity	135,712	257,885
Total liabilities and equity	$617,257	$864,671

See accompanying Footnotes to Consolidated Financial Statements.

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ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2014	2013	2012
	(In thousands, except per share data)		
Service revenues	$384,938	$391,317	$354,583
Product revenues	124,620	157,850	171,734
Total net revenues	509,558	549,167	526,317
Cost of services	278,627	272,047	219,324
Cost of products	68,608	112,346	91,192
Impairment of multi-client data library	100,100	5,461	—
Gross profit	62,223	159,313	215,801
Operating expenses:			
Research, development and engineering	41,009	37,742	34,080
Marketing and sales	39,682	38,583	35,240
General, administrative and other operating expenses	76,177	66,592	71,954
Impairment of goodwill and intangible assets	23,284	—	—
Total operating expenses	180,152	142,917	141,274
Income (loss) from operations	(117,929)	16,396	74,527
Interest expense, net	(19,382)	(12,344)	(5,265)
Equity in earnings (losses) of investments	(49,485)	(42,320)	297
Other income (expense)	79,860	(182,530)	17,124
Income (loss) before income taxes	(106,936)	(220,798)	86,683
Income tax expense	20,582	25,720	23,857
Net income (loss)	(127,518)	(246,518)	62,826
Net (income) loss attributable to noncontrolling interests	(734)	658	489
Net income (loss) attributable to ION	(128,252)	(245,860)	63,315
Preferred stock dividends	—	1,014	1,352
Conversion payment of preferred stock	—	5,000	—
Net income (loss) applicable to common shares	$(128,252)	$(251,874)	$61,963
Net income (loss) per share:			
Basic	$(0.78)	$(1.59)	$0.40
Diluted	$(0.78)	$(1.59)	$0.39
Weighted average number of common shares outstanding:			
Basic	164,089	158,506	155,801
Diluted	164,089	158,506	162,765

See accompanying Footnotes to Consolidated Financial Statements.

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

	Years Ended December 31,		
	2014	2013	2012
	(In thousands)		
Net income (loss)	$(127,518)	$(246,518)	$62,826
Other comprehensive income (loss), net of taxes, as appropriate:			
Foreign currency translation adjustments	(882)	713	2,756
Equity interest in investee's other comprehensive income (loss)	(841)	(373)	1,003
Unrealized gain on available-for-sale securities	28	277	425
Other changes in other comprehensive income	26	131	123
Total other comprehensive income (loss), net of taxes	(1,669)	748	4,307
Comprehensive net income (loss)	(129,187)	(245,770)	67,133
Comprehensive (income) loss attributable to noncontrolling interests	(734)	658	489
Comprehensive net income (loss) attributable to ION	$(129,921)	$(245,112)	$67,622

See accompanying Footnotes to Consolidated Financial Statements.

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ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2014	2013	2012
	(In thousands)		
Cash flows from operating activities:			
Net income (loss)	$(127,518)	$(246,518)	$62,826
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization (other than multi-client library)	27,656	18,158	16,202
Amortization of multi-client data library	64,374	86,716	89,080
Stock-based compensation expense	8,707	7,476	6,598
Equity in (earnings) losses of investments	49,485	42,320	(297)
Gain on sale of Source product line	(6,522)	—	—
Gain on sale of cost method investments	(5,463)	(3,591)	—
Accrual for (reduction of) loss contingency related to legal proceedings	(69,557)	183,327	10,000
Impairment of goodwill and intangible assets	23,284	—	—
Impairment of multi-client data library	100,100	5,461	—
Write-down of excess and obsolete inventory	6,952	21,197	1,326
Write-down of receivables from INOVA Geophysical	5,510	—	—
Write-down of receivables from OceanGeo	—	9,157	—
Write-down of marine equipment	—	—	5,928
Deferred income taxes	(437)	4,844	3,686
Change in operating assets and liabilities:			
Accounts receivable	41,943	(27,571)	4,006
Unbilled receivables	26,762	40,211	(64,156)
Inventories	(13,892)	(8,906)	(7,039)
Accounts payable, accrued expenses and accrued royalties	(4,771)	8,482	61,873
Deferred revenue	(8,382)	(6,253)	(6,957)
Other assets and liabilities	11,549	13,077	(13,995)
Net cash provided by operating activities	129,780	147,587	169,081
Cash flows from investing activities:			
Investment in multi-client data library	(67,785)	(114,582)	(145,627)
Purchase of property, plant, equipment and seismic rental equipment	(8,264)	(16,914)	(16,650)
Repayment of (net advances to) INOVA Geophysical	1,000	(5,000)	—
Net investment in and advances to OceanGeo B.V. prior to its consolidation	(3,074)	(24,755)	—
Net proceeds from sale of Source product line	14,394	—	—
Proceeds from sale of cost method investments	14,051	4,150	—
Maturity of short-term investments	—	—	20,000
Investment in convertible notes	—	(2,000)	(2,000)
Other investing activities	928	128	—
Net cash used in investing activities	(48,750)	(158,973)	(144,277)
Cash flows from financing activities:			
Proceeds from issuance of notes	—	175,000	—
Borrowings under revolving line of credit	15,000	35,000	148,250
Payments under revolving line of credit	(50,000)	(97,250)	(51,000)
Payments on notes payable and long-term debt	(12,998)	(4,361)	(101,702)

Cost associated with issuance of debt	(2,194)	(6,773)	—
Acquisition of non-controlling interest	(6,000)	—	—
Payment of preferred dividends	—	(1,014)	(1,352)
Conversion payment of preferred stock	—	(5,000)	—
Proceeds from employee stock purchases and exercise of stock options	577	2,527	807
Other financing activities	(359)	573	(1,457)
Net cash provided by (used in) financing activities	(55,974)	98,702	(6,454)
Effect of change in foreign currency exchange rates on cash and cash equivalents	496	(231)	219
Net increase in cash and cash equivalents	25,552	87,085	18,569
Cash and cash equivalents at beginning of period	148,056	60,971	42,402
Cash and cash equivalents at end of period	$173,608	$148,056	$60,971

See accompanying Footnotes to Consolidated Financial Statements.

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ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands, except shares)	Cumulative Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Treasury Stock	Noncontrolling Interests	Total Equity
	Shares	Amount	Shares	Amount						
Balance at January 1, 2012	27,000	$27,000	155,479,776	$1,555	$843,271	$(423,612)	$(16,193)	$(6,565)	$356	$425,812
Net income (a)	—	—	—	—	—	63,315	—	—	4	63,319
Translation adjustment	—	—	—	—	—	—	2,756	—	(38)	2,718
Change in fair value of effective cash flow hedges (net of taxes)	—	—	—	—	—	—	123	—	—	123
Equity interest in INOVA Geophysical's other comprehensive income	—	—	—	—	—	—	1,003	—	—	1,003
Unrealized net gain (loss) on available-for-sale securities	—	—	—	—	—	—	425	—	—	425
Preferred stock dividends	—	—	—	—	(1,352)	—	—	—	—	(1,352)
Stock-based compensation expense	—	—	—	—	6,598	—	—	—	—	6,598
Exercise of stock options	—	—	194,410	2	805	—	—	—	—	807
Vesting of restricted stock units/awards	—	—	764,704	8	(8)	—	—	—	—	—
Restricted stock cancelled for employee minimum income taxes	—	—	(209,068)	(2)	(1,266)	—	—	—	—	(1,268)
Issuance of stock for the ESPP	—	—	127,127	1	758	—	—	—	—	759
Tax benefits from stock-based compensation	—	—	—	—	(137)	—	—	—	—	(137)
Contribution from noncontrolling interests	—	—	—	—	—	—	—	—	212	212
	27,000	27,000	156,356,949	1,564	848,669	(360,297)	(11,886)	(6,565)	534	499,019

Balance at December 31, 2012										
Net loss (a)	—	—	—	—	—	(245,860)	—	—	(339)	(246,199)
Translation adjustment	—	—	—	—	—	—	713	—	(56)	657
Change in fair value of effective cash flow hedges (net of taxes)	—	—	—	—	—	—	131	—	—	131
Equity interest in INOVA Geophysical's other comprehensive loss	—	—	—	—	—	—	(373)	—	—	(373)
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	277	—	—	277
Preferred stock dividends	—	—	—	—	(1,014)	—	—	—	—	(1,014)
Conversion payment of preferred stock	(27,000)	(27,000)	6,065,075	61	21,939	—	—	—	—	(5,000)
Stock-based compensation expense	—	—	—	—	7,476	—	—	—	—	7,476
Exercise of stock options	—	—	707,575	7	2,520	—	—	—	—	2,527
Vesting of restricted stock units/awards	—	—	578,369	5	(5)	—	—	—	—	—
Restricted stock cancelled for employee minimum income taxes	—	—	(115,080)	(1)	(482)	—	—	—	—	(483)
Issuance of stock for the ESPP	—	—	144,869	1	779	—	—	—	—	780
Tax benefits from stock-based compensation	—	—	—	—	87	—	—	—	—	87
Balance at December 31, 2013	—	—	163,737,757	1,637	879,969	(606,157)	(11,138)	(6,565)	139	257,885
Net loss (a)	—	—	—	—	—	(128,252)	—	—	18	(128,234)
Translation adjustment	—	—	—	—	—	—	(882)	—	(58)	(940)
Change in fair value of effective	—	—	—	—	—	—	26	—	—	26

cash flow hedges (net of taxes)										
Equity interest in INOVA Geophysical's other comprehensive loss	—	—	—	—	—	—	(841)	—	—	(841)
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	28	—	—	28
Stock-based compensation expense	—	—	—	—	8,707	—	—	—	—	8,707
Exercise of stock options	—	—	28,500	—	95	—	—	—	—	95
Vesting of restricted stock units/awards	—	—	662,451	7	(7)	—	—	—	—	—
Restricted stock cancelled for employee minimum income taxes	—	—	(136,131)	(1)	(349)	—	—	—	—	(350)
Issuance of stock for the ESPP	—	—	191,518	2	480	—	—	—	—	482
Purchase of subsidiary shares from noncontrolling interest	—	—	—	—	(1,146)	—	—	—	—	(1,146)
Balance at December 31, 2014	—	$—	164,484,095	$1,645	$887,749	$(734,409)	$(12,807)	$(6,565)	$99	$135,712

(a) Net income attributable to noncontrolling interests for 2014, 2013 and 2012 excludes $(0.7) million, $(0.3) million and $(0.5) million, respectively, related to the redeemable noncontrolling interests, which is reported in the mezzanine equity section of the Consolidated Balance Sheet.

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, 2014 and 2013, there was $0.4 million and $0.7 million, respectively, of short-term restricted cash used to secure standby and commercial letters of credit, which is included within Prepaid Expenses 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 2014, 2013 and 2012, the Company capitalized, as part of its multi-client data library, $8.3 million, $2.1 million and $3.8 million, respectively, of direct internal processing costs. At December 31, 2014 and 2013, multi-client data library costs and accumulated amortization consisted of the following (in thousands):

	December 31,	
	2014	2013
Gross costs of multi-client data creation	$849,522	$791,522
Less accumulated amortization	(611,651)	(547,277)
Less impairments to multi-client data library	(119,202)	(5,461)
Total	$118,669	$238,784

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. For a discussion of impairments of the Company's multi-client data library in 2014 and 2013, see Footnote 2 "Impairments, Restructurings and Other Charges." There were no impairment charges associated with the Company's multi-client data library during 2012.

Polarcus Alliance

In June 2013, the Company entered into an alliance (the “Polarcus Alliance”) with Polarcus MC Ltd., a Cayman Islands limited liability company, (“Polarcus”) in order to collaborate on 3D multi-client data library projects. The premise of the Polarcus Alliance is for towed-streamer seismic services and other related services to be provided by Polarcus and data processing and reservoir services to be provided by the Company. Under the Polarcus Alliance, each party can identify and propose potential project opportunities to the other party, which the other party then has the option to propose amendments to the potential project and accept or reject participation in the proposed project.

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Under the Polarcus Alliance, the Company is currently participating in one project, offshore Ireland, that was proposed by Polarcus and accepted by the Company. Acquisition started and completed in the third quarter of 2014. This project is currently in the data processing phase. The transactions related to this project are included within the Company's consolidated results of operations, financial position and cash flows and are immaterial.

The activities of each project under the Polarcus Alliance are accounted for consistent with the Company's accounting policies related to the Company's multi-client data library, except that the Company only records revenue at the Company's agreed sharing ratio of each project and capitalizes its agreed share of the direct project costs. When the current project is complete, the Company will have increased its multi-client data library by its share of the total direct project costs.

The Company periodically settles any differences between actual payments for direct project costs made by each company and the agreed sharing ratio on a specific project through cash payments between the companies. As a result, the Company may build up a payable and/or receivable balance with Polarcus to be settled at a later date.

Equity Method Investments

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. As provided by ASC 815 "Investments," the Company accounts for its share of earnings in INOVA Geophysical on a one fiscal quarter lag basis. See further discussion regarding the Company's equity method investment, including the write-down of its investment, in INOVA Geophysical at Footnote 5 "Equity Method Investments."

Noncontrolling Interests

The Company has both redeemable and 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. Redeemable noncontrolling interests include noncontrolling ownership interests which provide the holders the rights, at certain times, to require the Company to acquire their ownership interest in those entities. These interests are not considered to be permanent equity and are reported in the mezzanine section of the Consolidated Balance Sheets at the greater of their carrying value or redemption value at the balance sheet date. Net income (loss) in the Consolidated Statements of Operations is attributable to both controlling and noncontrolling interests.

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: Solutions, Software and Marine Systems.

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 11 "Goodwill."

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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 “Property, Plant and Equipment,” 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 10 “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.

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 Solutions segment; (ii) seismic data acquisition systems and other seismic equipment within its Systems segment; (iii) seismic command and control software systems and software solutions for operations management within its Software segment; and (iv) fully-integrated ocean bottom seismic (“OBS”) solutions that include survey design and planning and data acquisition within its Ocean Bottom Services segment. All revenues of the Solutions and Ocean Bottom Services segments and the services component of revenues for the Software segment are classified as services revenues. All other revenues are classified as product revenues.

Multi-Client and Proprietary Surveys, Data Libraries and Imaging Services — As multi-client surveys are being designed, acquired and/or processed (referred to as 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) collectibility 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) collectibility 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.

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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) collectibility 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 Company applies the residual method.

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 Services — The Company recognizes revenues as they are realized and earned and can be reasonably measured, based on contractual dayrates 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”). The Company adopted this guidance as of January 1, 2010. Accordingly, the Company applied this guidance to transactions initiated or materially modified on or after January 1, 2010. The guidance does not apply to software sales accounted for under ASC 985-605. The Company also adopted, in the same period, guidance within ASC 985-605 that excludes from its scope revenue arrangements that include both tangible products and software elements, such that the tangible products contain both software and non-software components that function together to deliver the tangible product’s essential functionality.

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.

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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 8 "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.

Comprehensive Net Income (Loss)

Comprehensive net income (loss) as shown in the Consolidated Statements of Comprehensive Income (Loss) and the balance in Accumulated Other Comprehensive Loss as shown in the Consolidated Balance Sheets as of December 31, 2014 and 2013, consist of foreign currency translation adjustments, equity interest in INOVA Geophysical's accumulated other comprehensive income (loss) and unrealized gains or losses on available-for-sale securities.

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 (expense) as they occur. Total foreign currency transaction losses were $1.8 million, $1.1 million and $1.9 million for 2014, 2013 and 2012, respectively.

Concentration of Foreign Sales Risk

The majority of the Company's foreign sales are denominated in U.S. dollars. For 2014, 2013 and 2012, international sales comprised 74%, 73% and 69%, respectively, of total net revenues. Since 2008, global economic problems and uncertainties have generally increased in scope and nature. In the fourth quarter of 2014, crude oil prices dropped by approximately 45%–50% as the non-U.S. economic outlook continues to weaken, North American production continues to expand, and more recently, Saudi Arabia has publicly stated its intention to support its global market share at the expense of lower prices. The decline in crude oil prices, as well as U.S. and European Union sanctions against Russia related to its actions in Ukraine, have both contributed to the devaluation of the Russian ruble putting significant pressure on the Company's Russian-based customers and negatively impacting the appeal of seismic data located in Russia to potential non-Russian buyers. The Company's results of operations, liquidity and financial condition related to its operations in Russia are primarily denominated in U.S. dollars. 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.

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(2) Impairments, Restructurings and Other Charges

The recent decline in crude oil prices to five-year lows has negatively impacted the economic outlook of the Company's E&P customers, which has also negatively impacted the outlook for the Company's seismic contractor customers. In response to the decline in crude oil prices, E&P companies have turned their focus to spending reductions, with exploration spending receiving the largest reductions and seismic spending being one of the most discretionary parts of their exploration budgets.

During 2014, the Company recognized the following pre-tax charges (in thousands):

	Multi-client data library, net	Equity method investments[a]	Goodwill and Intangible Assets[b]	Asset write-downs and other	Severance charges	Total
Cost of goods sold	$100,100	$ —	$—	$8,051	$391	$108,542
Operating expenses	—	—	23,284	8,214 [c]	1,902	33,400
Equity in earnings (losses) of investments	—	34,199	—	—	—	34,199
Consolidated total	$100,100	$ 34,199	$23,284	$16,265	$2,293	$176,141

(a) Represents the full write-down of the Company's equity method investment in INOVA Geophysical of $30.7 million, in addition to the Company's share of charges related to excess and obsolete inventory and customer bad debts of $3.5 million. For a discussion of the Company's impairment of its equity method investment, see Footnote 5 "Equity Method Investments."

(b) Includes an impairment of the goodwill on the Company's Marine Systems reporting unit and an impairment of certain intangible assets. For a discussion of the impairment of the goodwill, see Footnote 11 "Goodwill." For a discussion of the impairment of the intangible asset, see Footnote 10 "Details of Selected Balance Sheet Accounts."

(c) Includes outstanding receivables from INOVA Geophysical of $5.5 million.

Impairment of Multi-client Data Library

In connection with the preparation of these financial statements, the Company wrote down the multi-client data library, primarily associated with Arctic and onshore North American programs, by $100.1 million after it was determined that estimated future cash flows would not be sufficient to recover the carrying value due to current market conditions. The reductions in exploration spending, discussed above, have had an impact on the Company's results of operations for 2014, especially those of its Solutions segment. Sales of Arctic programs have been specifically impacted by recent events in Russia. The decline in crude oil prices, as well as U.S. and European Union sanctions against Russia related to its actions in Ukraine, have both contributed to the devaluation of the Russian ruble putting significant pressure on the Company's Russian-based customers and negatively impacting the appeal of seismic data located in Russia to potential non-Russian buyers. In North America, the land seismic market continues to experience softness. E&P customer spending in the natural gas shale plays has been limited due to associated gas being produced from unconventional oil wells in North America increasing natural gas supplies putting downward pressure on U.S. natural gas prices.

This impairment of the Company's multi-client data library was recorded because the net capitalized costs exceeded the fair value of the multi-client data library as measured by estimated future cash flows. The fair values of the individual libraries were measured using valuation techniques consistent with the income approach, converting future cash flows to a single discounted amount. Significant inputs used to determine the fair values of the libraries included estimates of: (i) revenues; (ii) future costs including royalties; and (iii) an appropriate discount rate. In order to estimate future cash flows, the Company considered historical cash flows, existing and future contracts and changes in the market environment and other factors that may affect future cash flows. To the extent applicable, the assumptions the Company used are consistent with forecasts that it is otherwise required to make (for example, in preparing its earnings forecasts). The use of this method involves inherent uncertainty. The Company has determined that the fair value measurements of this nonfinancial asset are level 3 in the fair value hierarchy.

In 2013, the Company wrote down the multi-client data library by $5.5 million primarily due to cost overruns, which resulted in costs exceeding the sales forecast, triggering the impairment.

2014 Restructuring

Due to the economic conditions described above, in the fourth quarter of 2014, the Company initiated restructurings across all of its segments, except for its Ocean Bottom Services segment. This restructuring involves the reduction of headcount in all those segments by approximately 10%. The Company incurred a total of $2.3 million of severance charges, which will be paid out in 2015. The Company expects that this reduction will result in annual cash savings of approximately $15.0 million related to this restructuring.

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In connection with the preparation of these financial statements, the Company re-evaluated the realizability of certain inventory and receivables. The Company wrote down inventory by recording $7.0 million of charges related to excess and obsolete inventory and wrote down certain receivables totaling $8.2 million, which includes receivables due from INOVA Geophysical.

2013 Restructuring

In the third quarter of 2013, the Company initiated a restructuring of its Systems segment. This restructuring involved the closing of certain manufacturing facilities and a reduction of headcount in those and other facilities.

As of September 30, 2013, the Company had reduced its employee headcount in its Systems segment by 31% of the total Systems full-time employee headcount. Of the total amount expensed in 2013, $3.7 million is included in cost of sales, with the remaining $1.9 million included in operating expenses.

During 2013, the Company recognized the following pre-tax charges related to its Systems segment restructuring activity (in thousands):

	Facility charges	Severance charges	Asset write-downs and other	Total
Cost of goods sold	$647	$3,729	$21,351	$25,727
Operating expenses	$—	$1,873	$383	$2,256
Consolidated total	$647	$5,602	$21,734	$27,983

(3) Acquisition of OceanGeo

In February 2013, the Company acquired a 30% ownership interest in OceanGeo B.V. (“OceanGeo”). OceanGeo specializes in seismic acquisition operations using ocean bottom cables deployed from vessels leased by OceanGeo. In October 2013, the Company reached agreement with its joint venture partner in OceanGeo, Georadar Levantamentos Geofisicos S/A (“Georadar”), for the Company to have the option to increase its ownership percentage in OceanGeo from 30% to 70%, subject to certain conditions.

To further assist OceanGeo in acquiring backlog, in October 2013, the Company also agreed to loan OceanGeo additional funds for working capital, as necessary, up to a maximum of $25.0 million. Prior to obtaining a controlling interest in OceanGeo, the Company advanced a total of $18.9 million to OceanGeo.

In January 2014, the Company acquired an additional 40% interest in OceanGeo, through the conversion of certain outstanding amounts loaned to OceanGeo by the Company into additional equity interests of OceanGeo, bringing the Company’s total equity interest in OceanGeo to 70% and giving the Company control over OceanGeo. The Company has included in its results of operations, the results of OceanGeo from the date of the Company’s acquisition of a controlling interest.

In July 2014, the Company paid $6.0 million to Georadar for the remaining 30% of OceanGeo, increasing its equity interest in OceanGeo to 100%. Since the initial investment in early 2013 up to the time the Company increased its interest to 100%, the Company has invested approximately $40.5 million to OceanGeo.

The Company acquired OceanGeo as part of its strategy to expand the range of service offerings it can provide to oil and gas exploration and production customers and to put its Calypso® seabed acquisition technology to work in a service model to meet the growing demand for seabed seismic services.

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The acquisition of OceanGeo was accounted for by the acquisition method, whereby the assets acquired and liabilities assumed were recorded at their fair values as of the acquisition date based on an income approach. The estimated fair value of the assets acquired and liabilities assumed approximated the purchase price and therefore no goodwill or bargain purchase was recognized. During the three months ended September 30, 2014, management adjusted its purchase accounting valuation estimates and, as a result, retrospectively adjusted the valuations of assets with a corresponding increase to property, plant, and equipment as of the acquisition date. The retrospective adjustments amounted to approximately $3.9 million and primarily related to revisions of estimates of recoverability of OceanGeo's multi-client data library. As of December 31, 2014, the Company completed its purchase price allocation and no other material adjustments to the preliminary purchase price adjustments were recorded. In connection with the acquisition, the Company incurred $1.3 million in acquisition-related transaction costs related to professional services and fees. These costs were expensed as incurred and were included in other income (expense), net in the Company's condensed consolidated statement of operations for the twelve months ended December 31, 2014. As a result of consolidating OceanGeo's results into the Company's consolidated results of operations for the period from the acquisition date at the end of January 2014 to December 31, 2014, the Company's results of operations include $103.2 million of OceanGeo revenues and $19.1 million of income from OceanGeo's operations for the twelve months ended December 31, 2014. The following table summarizes the fair value assigned to the assets acquired and liabilities assumed, as well as the noncontrolling interest, at the acquisition date (in thousands):

Estimated Fair Value of Assets Acquired and Liabilities Assumed:	
Cash and cash equivalents	$609
Accounts receivable	9,247
Prepaid expenses and other current assets	1,433
Property, plant, equipment and seismic rental equipment, net	18,474
Other assets	2,227
Total identifiable assets	31,990
Accounts payable and accrued liabilities	(13,464)
Bank loans	(6,135)
Other liabilities	(1,026)
Net assets	11,365
Noncontrolling interest	(3,410)
Total consideration	$7,955

The following summarized unaudited pro forma consolidated income statement information for 2014 and 2013, assumes that the OceanGeo acquisition had occurred as of the beginning of the periods presented. The Company has prepared these unaudited pro forma financial results for comparative purposes only. These unaudited pro forma financial results may not be indicative of the results that would have occurred if the Company had completed the acquisition as of the beginning of the periods presented or the results that may be attained in the future. Amounts presented below are in thousands, except for the per share amounts:

Pro forma Consolidated ION Income Statement Information (Unaudited)	Years Ended December 31,	
	2014	2013
Net revenues	$518,742	$580,834
Loss from operations	$(114,346)	$(19,300)
Net loss	$(126,492)	$(262,974)
Net loss applicable to common shares	$(127,226)	$(268,330)
Basic and diluted net loss per common share	$(0.78)	$(1.69)

(4) Segment and Geographic Information

The Company evaluates and reviews its results based on four segments: Solutions, Systems, Software and Ocean Bottom Services. The Company measures segment operating results based on income (loss) from operations. In addition, the Company has an equity ownership interest its INOVA Geophysical joint venture. See Footnote 5 "Equity Method Investments" for the summarized financial information for INOVA Geophysical.

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A summary of segment information follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
Net revenues:			
Solutions:			
New Venture	$98,649	$154,578	$147,346
Data Library	66,180	111,998	88,085
Total multi-client revenues	164,829	266,576	235,431
Data Processing	113,075	120,808	115,834
Total	$277,904	$387,384	$351,265
Systems:			
Towed Streamer	$43,995	$66,991	$77,769
Ocean Bottom Equipment	—	7,307	14,823
Other	44,422	48,134	39,404
Total	$88,417	$122,432	$131,996
Software:			
Software Systems	$36,203	$35,418	$39,738
Services	3,790	3,933	3,318
Total	$39,993	$39,351	$43,056
Ocean Bottom Services	$103,244	$—	$—
Total	$509,558	$549,167	$526,317
Gross profit:			
Solutions	$(24,345) [a]	$111,108	$132,950
Systems	29,829 [b]	19,999	50,790
Software	28,835	28,206	32,061
Ocean Bottom Services	27,904	—	—
Total	$62,223	$159,313	$215,801
Gross margin:			
Solutions	(9)%	29 %	38 %
Systems	34 %	16 %	38 %
Software	72 %	72 %	74 %
Ocean Bottom Services	27 %	— %	— %
Total	12 %	29 %	41 %
Income (loss) from operations:			
Solutions	$(80,653) [a]	$61,146	$88,589
Systems	(23,521) [b]	(9,957)	10,132
Software	20,212	23,602	28,129
Ocean Bottom Services	19,070	—	—
Corporate and other	(53,037)	(58,395)	(52,323)
Income (loss) from operations	(117,929)	16,396	74,527
Interest expense, net	(19,382)	(12,344)	(5,265)
Equity in earnings (losses) of investments	(49,485)	(42,320)	297
Other income (expense)	79,860	(182,530)	17,124
Income (loss) before income taxes	$(106,936)	$(220,798)	$86,683

[a] Includes a charge of $100.1 million to write down the multi-client data library, impacting gross profit (loss), in addition to charges for the impairment of intangible assets and severance-related charges within the Solutions segment.

[b] Includes a charge of $21.9 million to write down goodwill, impacting income (loss) from operations, in addition to charges for write-downs of inventory and receivables and severance-related charges within the Systems segment.

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	Years Ended December 31,		
	2014	2013	2012
Depreciation and amortization (including multi-client data library):			
Solutions	$80,138	$99,774	$98,342
Systems	1,860	2,665	4,185
Software	989	699	776
Ocean Bottom Services	6,517	—	—
Corporate and other	2,526	1,736	1,979
Total	$92,030	$104,874	$105,282

	December 31,	
	2014	2013
Total assets:		
Solutions	$265,505	$445,581
Systems	84,465	139,074
Software	38,479	45,343
Ocean Bottom Services	56,637	—
Corporate and other	172,171	234,673
Total	$617,257	$864,671

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

	December 31,	
	2014	2013
Total assets by geographic area:		
North America	$347,419	$609,739
Europe	117,622	76,601
Middle East	96,532	128,909
Latin America	36,529	33,375
Other	19,155	16,047
Total	$617,257	$864,671

Intersegment sales are insignificant for all periods presented. Corporate assets include all assets specifically related to corporate personnel and operations, a majority of cash and cash equivalents, and the investment in INOVA Geophysical. 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,		
	2014	2013	2012
Net revenues by geographic area:			
North America	$130,224	$150,160	$164,157
Latin America	111,078	54,008	46,212
Europe	100,188	198,977	200,589
Africa	75,507	16,474	18,469
Asia Pacific	49,881	52,672	55,028
Middle East	39,142	63,157	37,471
Commonwealth of Independent States	3,538	13,719	4,391
Total	$509,558	$549,167	$526,317

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.

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(5) Equity Method Investments

The following table reflects the change in the Company's equity method investments from equity method investees during the year ended December 31, 2014 (in thousands):

	INOVA Geophysical	OceanGeo	Total
Investment at December 31, 2013	$51,065	$2,800	$53,865
Equity in losses of investments	(19,525)	738	(18,787)
Advances to OceanGeo (prior to consolidation)	—	3,683	3,683
Acquisition of controlling interest (consolidation) of OceanGeo	—	(7,221)	(7,221)
Equity interest in investees' other comprehensive income (loss)	(1,987)	—	(1,987)
Write-down of equity-method investment in INOVA[1]	(29,553)	—	(29,553)
Investments at December 31, 2014	$—	$—	$—

(1) This write-down does not include an additional $1.1 million impairment of the Company's share of INOVA's balance of Accumulated other comprehensive loss. The total impairment recorded by the Company equals $30.7 million, as discussed below.

INOVA Geophysical

The Company owns a 49% interest in a land seismic equipment business with BGP. BGP is a subsidiary of China National Petroleum Corporation ("CNPC") and is a leading global geophysical services contracting company. The joint venture company, organized under the laws of the People's Republic of China, is named INOVA Geophysical Equipment Limited ("INOVA Geophysical"). BGP owns the remaining 51% interest in INOVA Geophysical. INOVA Geophysical is managed through a Board of Directors consisting of four members appointed by BGP and three members appointed by the Company.

Equity in Losses — The Company accounts for its share of earnings in INOVA Geophysical on a one fiscal quarter lag basis. Thus, the Company's share of INOVA Geophysical's results for the period from October 1, 2013 to September 30, 2014 ("Fiscal 2014"), is included in the Company's financial results for its fiscal year ended December 31, 2014, the Company's share of INOVA Geophysical's results for the period from October 1, 2012 to September 30, 2013 ("Fiscal 2013"), is included in the Company's financial results for its fiscal year ended December 31, 2013, and the Company's share of INOVA Geophysical's results for the period from October 1, 2011 to September 30, 2012 ("Fiscal 2012"), is included in the Company's financial results for its fiscal year ended December 31, 2012.

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. In December 2014, the Company wrote its investment in INOVA down to zero as of December 31, 2014. The Company has no obligation, implicit or explicit, to fund any expenses of INOVA Geophysical.

The following table reflects summarized financial information for INOVA Geophysical, on a 100% basis, as of September 30, 2014 and 2013 and for Fiscal 2014, Fiscal 2013 and Fiscal 2012 (in thousands):

(Unaudited)	September 30,	
	2014	2013
Current assets	$105,085	$147,475
Non-current assets	63,212	71,551
Current liabilities	99,732	110,972
Non-current liabilities	6,498	2,731
Equity	$62,067	$105,323

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	Fiscal 2014 (unaudited)		Fiscal 2013 (unaudited)		Fiscal 2012
Total net revenues	$89,975		$183,619		$188,336
Gross profit (loss)	$247	[a]	$(1,988)	[b]	$39,320
Income (loss) from operations	$(34,540)	[a]	$(44,463)		$3,241
Net income (loss)	$(40,087)		$(46,149)	[b]	$2,197

[a] Impacting INOVA Geophysical's Fiscal 2014 gross profit (loss) is $3.8 million of a write-down of excess and obsolete inventory. In addition to the special item impacting gross profit (loss), income (loss) from operations was also impacted by $3.4 million of charges related to customer bad debts.

[b] Includes approximately $36.5 million of restructuring and special items associated with the impairment of intangible assets, write-down of excess and obsolete inventory and rental equipment, and severance-related charges. In addition to the restructuring and special items impacting gross profit, Net income (loss) was also impacted by $1.8 million of other restructuring and special items.

Impairment — In connection with the preparation of these financial statements, the Company's investment in INOVA was fully impaired as it determined that the decline in fair value below cost basis was other-than-temporary. This impairment was the result of the land seismic market having softened significantly due to reduced E&P company spending in the North American natural gas shale plays and reduced seismic activity in Russia and other regions due to lower crude oil prices. INOVA Geophysical has also experienced significant losses in four of the last five years and reduced equipment purchases by BGP in the last year. The Company recorded a charge of $30.7 million, impairing its equity investment in INOVA and its share of INOVA's Accumulated other comprehensive loss, reducing both balances to zero.

The Company considered various qualitative factors to determine if a decrease in the value of the investment was other-than-temporary. These factors included the age of the venture, intent and ability for the Company to recover its investment in the entity, financial condition and long-term prospects of the unconsolidated entity, short-term liquidity needs of the unconsolidated entity, trends in the general economic environment, recoverability of the investment through future cash flows and relationships with the other partners and banks. The Company utilized a combination of the market and income approaches or a combination of these valuation techniques to determine fair value. Inputs to such measures included observable market data obtained from independent sources such as recent market transactions for similar assets. To the extent observable inputs are not available the Company utilizes unobservable inputs based upon the assumptions market participants would use in valuing the asset. Examples of utilized unobservable inputs are future cash flows, long term growth rates and applicable discount rates. The Company has determined that the fair value measurements of this nonfinancial asset are level 3 in the fair value hierarchy.

Related Party Transactions

For information regarding transactions between the Company and its equity method investee, see Footnote 19 "Certain Relationships and Related Party Transactions."

(6) Long-term Debt and Lease Obligations

Obligations (in thousands)	December 31, 2014	2013
Senior secured second-priority notes	$175,000	$175,000
Revolving line of credit	—	35,000
Equipment capital leases	15,059	8,651
Other debt obligations	535	1,501
Total	190,594	220,152
Current portion of long-term debt and lease obligations	(7,649)	(5,906)
Non-current portion of long-term debt and lease obligations	$182,945	$214,246

New Credit Facility, including Revolving Line of Credit

In August 2014, ION and its subsidiaries, ION Exploration Products (U.S.A.), Inc., I/O Marine Systems, Inc. and GX Technology Corporation (collectively, the "Subsidiary Borrowers" and together with ION, the "Borrowers"), entered into a new credit facility (the "New Credit Facility").

The terms of the New Credit Facility are set forth in a revolving credit and security agreement dated as of August 22, 2014, among the Borrowers, the lenders party thereto and PNC Bank, National Association ("PNC"), as agent for the lenders.

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The New Credit Facility replaced the Company's prior credit facility under a credit agreement dated as of March 25, 2010, as amended, by and among ION, the subsidiary guarantors that were parties thereto and China Merchants Bank Co., Ltd., New York Branch ("CMB"), as administrative agent and lender (the "Prior Credit Facility"). With the Prior Credit Facility being replaced by the New Credit Facility in August 2014, INOVA no longer provides a bank standby letter of credit as credit support for the Company's obligations under the New Credit Facility.

The revolving credit and security agreement contemplates maximum credit facilities of up to $175.0 million in the aggregate, consisting of (i) a revolving facility of up to $125.0 million, to which the lenders have committed $80.0 million (with availability under such revolving facility subject at all times to a borrowing base and other conditions to borrowing) and up to an additional $45.0 million of which is subject to the implementation of certain accordion provisions and (ii) an uncommitted term facility in an aggregate amount of up to $50.0 million on terms to be mutually agreed at a later date and subject to receiving commitments of lenders to such term facility. As of December 31, 2014, the Company's has approximately $68.2 million available under the New Credit Facility. The amount available will increase or decrease monthly as the Company's borrowing base changes.

The borrowing base for revolving credit borrowings under the New Credit Facility is calculated using a formula based on certain eligible receivables, eligible inventory and other amounts. In addition, the New Credit Facility includes a $15.0 million sublimit for the issuance of documentary and standby letters of credit. As of December 31, 2014, there was no outstanding indebtedness under the New Credit Facility. The Company expects that any amounts drawn under the New Credit Facility sooner than one year prior to the maturity of the New Credit Facility will be classified as long-term debt.

The New Credit Facility is available to provide for the Company's general corporate needs, including the Company's working capital requirements, capital expenditures, surety deposits and acquisition financing.

The interest rate on revolving credit borrowings under the New Credit Facility will be, at the Company's option, (i) an alternate base rate equal to the highest of (a) the prime rate of PNC, (b) a federal funds effective rate plus 0.50% or (c) a LIBOR-based rate plus 1.0%, plus an applicable interest margin, or (ii) a LIBOR-based rate, plus an applicable interest margin. The revolving credit indebtedness under the New Credit Facility is scheduled to mature on the earlier of (x) August 22, 2019 or (y) the date which is 90 days prior to the maturity date of the Notes (as defined below) (or such later due date if the Notes have been refinanced).

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

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

The revolving credit and security agreement requires compliance with certain financial covenants, including requirements related to ION and the Subsidiary Borrowers, measured on a rolling four quarter basis, (i) maintaining a minimum fixed charge coverage ratio of 1.1 to 1 as of the end of each fiscal quarter during the existence of a covenant testing trigger event, and (ii) not exceeding a maximum senior secured leverage ratio of 3.0 to 1 as of the end of each fiscal quarter.

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. The senior secured leverage ratio is defined as the ratio of (x) total senior funded debt to (y) ION's EBITDA (excluding expenditures related directly to the Company's multi-client data library). As of December 31, 2014, the Company was in compliance with these financial covenants.

The revolving credit and security agreement 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 revolving credit and security agreement.

In connection with entering into the New Credit Facility, PNC replaced CMB as administrative agent, first lien representative for the first lien secured parties and collateral agent for the first lien secured parties under the Intercreditor Agreement (as defined below). The Company incurred $1.9 million of costs related to entering into the New Credit Facility, which are being amortized over 3.5 years. As a part of the cancellation of the Prior Credit Facility, the Company wrote-off to interest expense $0.3 million of unamortized debt issuance costs.

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Senior Secured Second-Priority Notes

In May 2013, the Company sold $175.0 million aggregate principal amount of 8.125% Senior Secured Second-Priority Notes due 2018 (“Notes”) in a private offering pursuant to an Indenture dated as of May 13, 2013. The Notes are senior secured second-priority obligations of the Company, are guaranteed by certain of the Company’s U.S. subsidiaries, and mature on May 15, 2018. Interest on the 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. In May 2014, the holders of the Notes exchanged their Notes for a like principal amount of registered Notes with the same terms.

On or after May 15, 2015, the Company may on one or more occasions redeem all or a part of the Notes at the redemption prices set forth below, plus accrued and unpaid interest and special interest, if any, on the Notes redeemed during the 12-month period beginning on May 15th of the years indicated below:

Date	Percentage
2015	104.063%
2016	102.031%
2017 and thereafter	100.000%

The Notes are initially jointly and severally guaranteed on a senior secured basis by each of 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 “Notes Guarantors”). The Notes and the guarantees are secured, subject to certain exceptions and permitted liens, by second-priority liens on substantially all of the assets that secure the indebtedness under the New Credit Facility (see “– New Credit Facility, including Revolving Line of Credit” above). The indebtedness under the Notes is effectively junior to the Company’s obligations under the New Credit Facility to the extent of the value of the collateral securing the New Credit Facility, and to any other indebtedness secured on a first-priority basis to the extent of the value of the Company’s assets subject to those first-priority security interests.

The Notes contain 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 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 Indenture are subject to certain exceptions and qualifications. All of the Company’s subsidiaries are currently restricted subsidiaries. As of December 31, 2014, the Company was in compliance with these covenants.

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 2017. Interest accrues under these leases at rates of up to 4.0% 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.

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

Years Ended December 31,	Long-Term Debt	Capital Lease Obligations
2015	$ 535	$7,114
2016	—	5,383
2017	—	2,562
2018	175,000	—
2019	—	—
Thereafter	—	—
Total	$ 175,535	$15,059

OceanGeo Brazil Bank Debt

In connection with the Company's acquisition of a controlling interest in OceanGeo in the first quarter of 2014, OceanGeo's existing debt was consolidated into the Company's accounts. Post acquisition, OceanGeo repaid this debt in full.

(7) 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, 2014, 2013 and 2012 were 8,986,025, 8,258,500 and 4,864,553, respectively.

Prior to September 30, 2013, there were 27,000 shares outstanding of the Company's Series D Cumulative Convertible Preferred Stock ("Series D Preferred Stock"). On September 30, 2013, the holder of all of the outstanding shares of Series D Preferred Stock converted those shares into 6,065,075 shares of common stock. The effects of the outstanding shares of all Series D Preferred Stock were anti-dilutive for the year ended December 31, 2013.

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

	Years Ended December 31,		
	2014	2013	2012
Net income (loss) applicable to common shares	$(128,252)	$(251,874)	$61,963
Income impact of assumed Series D Preferred Stock conversion	—	—	1,352
Net income (loss) after assumed Series D Preferred Stock conversion	$(128,252)	$(251,874)	$63,315
Weighted average number of common shares outstanding	164,089	158,506	155,801
Effect of dilutive stock awards	—	—	899
Effect of Series D Preferred Stock	—	—	6,065
Weighted average number of diluted common shares outstanding	164,089	158,506	162,765
Basic net income (loss) per share	$(0.78)	$(1.59)	$0.40
Diluted net income (loss) per share	$(0.78)	$(1.59)	$0.39

(8) Income Taxes

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

	Years Ended December 31,		
	2014	2013	2012
Domestic	$(162,151)	$(221,185)	$34,633
Foreign	55,215	387	52,050
Total	$(106,936)	$(220,798)	$86,683

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

	Years Ended December 31,		
	2014	2013	2012
Current:			
Federal	$(678)	$4,113	$873
State and local	(42)	485	192
Foreign	21,722	16,278	19,106
Deferred:			
Federal	1,004	4,012	3,822
Foreign	(1,424)	832	(136)
Total income tax expense	$20,582	$25,720	$23,857

A reconciliation of the expected income tax expense on income (loss) before income taxes using the statutory federal income tax rate of 35% for 2014, 2013 and 2012 to income tax expense follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
Expected income tax expense (benefit) at 35%	$(37,428)	$(77,279)	$30,339
Foreign tax rate differential	(10,481)	(2,348)	(5,404)
Foreign tax differences	6,444	16,808	4,897
State and local taxes	(42)	485	192
Nondeductible expenses and other	(1,584)	(58)	47
Goodwill impairment	9,444	—	—
Valuation allowance:			
Valuation allowance on equity in losses of INOVA Geophysical	17,644	7,871	(104)
Valuation allowance on operations	36,585	80,241	(6,110)
Total income tax expense	$20,582	$25,720	$23,857

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The tax effects of the cumulative temporary differences resulting in the net deferred income tax asset (liability) are as follows (in thousands):

	December 31,	
	2014	2013
Current deferred:		
Deferred income tax assets:		
Accrued expenses	$6,495	$5,898
Allowance accounts	7,076	6,282
Total current deferred income tax asset	13,571	12,180
Valuation allowance	(12,612)	(10,535)
Net current deferred income tax asset	959	1,645
Deferred income tax liabilities:		
Unbilled receivables	(6,865)	(13,516)
Total net current deferred income tax liability	$(5,906)	$(11,871)
Non-current deferred:		
Deferred income tax assets:		
Net operating loss carryforward	$61,227	$9,043
Capital loss carryforward	18,385	19,657
Equity method investment	58,820	41,176
Basis in identified intangibles	9,263	9,950
Basis in research and development	3,819	3,733
Contingency accrual	43,319	67,664
Tax credit carryforwards and other	11,515	8,893
Total non-current deferred income tax asset	206,348	160,116
Valuation allowance	(192,652)	(140,500)
Net non-current deferred income tax asset	13,696	19,616
Deferred income tax liabilities:		
Basis in property, plant and equipment	(5,082)	(5,457)
Total net non-current deferred income tax asset	$8,614	$14,159

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, 2014, the Company has a net U.S. deferred tax asset of approximately $2.7 million. The Company has determined that this net deferred tax asset is more likely than not to be realized through the expected reversal of existing temporary differences and the ability to offset the related deductions against taxable income in open carryback years. 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. In the event the Company's expectations of future operating results change, an additional valuation allowance may be required to be established on the Company's existing unreserved net U.S. deferred tax assets.

At December 31, 2014, the Company had U.S. net operating loss carryforwards of approximately $146.5 million, expiring in 2034, and net operating loss carryforwards outside of the U.S. of approximately $47.1 million, the majority of which expires beyond 2027. At December 31, 2014, the Company also had $52.5 million of U.S. capital loss carryforwards. The majority of these capital loss carryforwards expire in 2015.

As of December 31, 2014, the Company has approximately $2.0 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 2014, 2013 and 2012, the aggregate changes in the Company's total gross amount of unrecognized tax benefits are summarized as follows (in thousands):

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	Years Ended December 31,		
	2014	2013	2012
Beginning balance	$2,219	$1,834	$1,375
Increases in unrecognized tax benefits – prior year positions	—	—	—
Increases in unrecognized tax benefits – current year positions	263	385	459
Decreases in unrecognized tax benefits – prior year position	(525)	—	—
Ending balance	$1,957	$2,219	$1,834

The Company's U.S. federal tax returns for 2011 and subsequent years remain subject to examination by tax authorities. The Company is no longer subject to IRS examination for periods prior to 2011, although carryforward attributes that were generated prior to 2011 may still be adjusted upon examination by the IRS if they either have been or will be used in a future period. In the Company's foreign tax jurisdictions, tax returns for 2009 and subsequent years generally remain open to examination.

As of December 31, 2014, the Company considered the outside book-over-tax basis difference in its foreign subsidiaries to be in the amount of approximately $61.2 million. United States income taxes have not been provided on this difference as it is the Company's intention to reinvest the undistributed earnings of its foreign subsidiaries indefinitely. The Company's U.S. operations are expected to be fully supported by existing cash balances and U.S.-generated cash flows. These foreign earnings could become subject to additional tax if remitted, or deemed remitted, to the United States as a dividend; however, it is not practicable to estimate the additional amount of taxes payable.

(9) Other Income (Expense)

A summary of other income (expense) follows (in thousands):

	Years Ended December 31,		
	2014	2013	2012
Reduction of (accrual for) loss contingency related to legal proceedings (Footnote 17)	$69,557	$(183,327)	$(10,000)
Gain on sale of a product line[1]	6,522	—	—
Gain on sale of cost method investments[2]	5,463	3,591	—
Gain on legal settlement[3]	—	—	30,895
Other income (expense)	(1,682)	(2,794)	(3,771)
Total other income (expense)	$79,860	$(182,530)	$17,124

(1) In 2014, the Company sold its Source product line for $14.4 million, net of transaction fees, recording a gain of approximately $6.5 million before taxes. The historical results of this product line have not been material to the Company's results of operations.

(2) Includes the 2014 sale of the Company's cost method investment in a privately-owned U.S.-based technology company for total proceeds of approximately $16.5 million, of which $14.1 million was due and paid at closing.

(3) Gain relates to the 2012 settlement of a patent infringement lawsuit with Sercel.

(10) Details of Selected Balance Sheet Accounts

Accounts Receivable

A summary of accounts receivable follows (in thousands):

	December 31,	
	2014	2013
Accounts receivable, principally trade	$121,957	$156,670
Less allowance for doubtful accounts	(7,632)	(7,222)
Accounts receivable, net	$114,325	$149,448

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Inventories

A summary of inventories follows (in thousands):

	December 31,	
	2014	2013
Raw materials and purchased subassemblies	$41,461	$54,168
Work-in-process	18,221	2,297
Finished goods	21,284	33,263
Reserve for excess and obsolete inventories	(29,804)	(32,555)
Total	$51,162	$57,173

The Company provides for estimated obsolescence or excess inventory in amounts equal to the difference between the cost of inventory and market based upon assumptions about future demand for the Company's products and market conditions. For 2014, the reserve for excess and obsolete inventories decreased primarily due to the disposal of reserved inventory partially offset by the increase in the Company's reserve for excess and obsolete inventories by $7.0 million related to write-downs of inventory resulting from restructuring activities. For additional information related to the Company's restructuring charges, see Footnote 2 "Impairments, Restructurings and Other Charges." For 2013, the Company recorded inventory obsolescence and excess inventory charges of approximately $21.2 million.

Property, Plant, Equipment and Seismic Rental Equipment

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

	December 31,	
	2014	2013
Buildings	$25,343	$23,292
Machinery and equipment	144,864	97,242
Seismic rental equipment	2,166	8,649
Furniture and fixtures	4,064	4,673
Other	16,481	3,577
Total	192,918	137,433
Less accumulated depreciation	(123,078)	(90,749)
Property, plant, equipment and seismic rental equipment, net	$69,840	$46,684

Total depreciation expense, including amortization of assets recorded under capital leases, for 2014, 2013 and 2012 was $25.1 million, $14.8 million and $12.5 million, respectively. In 2012, the Company wrote down $5.9 million of marine seismic equipment it had leased to a marine seismic contractor. This write-down was reflected in general, administrative and other operating expenses.

Intangible Assets

A summary of intangible assets, net, follows (in thousands):

	December 31, 2014		
	Gross Amount	Accumulated Amortization	Net
Customer relationships	$40,234	$(33,446)	$6,788
Intellectual property rights	3,350	(3,350)	—
Total	$43,584	$(36,796)	$6,788
	December 31, 2013		
	Gross Amount	Accumulated Amortization	Net
Customer relationships	$42,593	$(31,880)	$10,713
Intellectual property rights	4,300	(3,766)	534
Total	$46,893	$(35,646)	$11,247

In connection with the preparation of these financial statements, the Company wrote down the book value of certain relationships in its Solutions segment by $1.4 million. Total amortization expense for intangible assets for 2014, 2013 and 2012 was $2.5 million, $3.8 million and $3.9 million, respectively. A summary of the estimated amortization expense for the next five years follows (in thousands):

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Years Ended December 31,	
2015	$1,939
2016	$1,675
2017	$1,452
2018	$1,225
2019	$497

Accrued Expenses

A summary of accrued expenses follows (in thousands):	December 31,	
	2014	2013
Accrued multi-client data library acquisition costs	$6,458	$25,140
Compensation, including compensation-related taxes and commissions	33,386	29,727
Deferred income tax liability	5,900	11,967
Income tax payable	8,865	5,845
Other	10,655	11,679
Total	$65,264	$84,358

Other Long-term Liabilities

A summary of other long-term liabilities follows (in thousands):	December 31,	
	2014	2013
Accrual for loss contingency related to legal proceedings (Footnote 17)	$123,770	$193,327
Facility restructuring accrual	4,667	4,837
Other	15,367	12,438
Total	$143,804	$210,602

(11) Goodwill

On December 31, 2014, the Company completed the annual reviews of the carrying value of goodwill in its Solutions, Software and Marine Systems reporting units, and recorded a charge through Income (loss) from operations. In connection with the preparation of these financial statements, the Company determined that the $21.9 million of goodwill in its Marine Systems reporting unit was fully impaired. Remaining goodwill as of December 31, 2014 was comprised of $24.4 million and $2.9 million in the Company's Software and Solutions reporting units, respectively. The 2014 quantitative assessment indicated that the fair values of its Software and Solutions reporting units significantly exceeded their carrying values. However, if the estimates or related projections associated with the reporting units significantly change in the future, the Company may be required to record impairment charges.

For goodwill testing purposes, the $123.8 million litigation contingency accrual is assigned to the Marine Systems reporting unit. Based on this accrual and the recording of a valuation allowance on substantially all of the Company's net deferred tax assets, this reporting unit's carrying value was negative as of December 31, 2014. The negative carrying value required the Company to perform step 2 of the impairment test on its Marine Systems reporting unit; the test determined that the goodwill associated with the Marine Systems reporting unit was fully impaired.

The following is a summary of the changes in the carrying amount of goodwill for the years ended December 31, 2014 and 2013 (in thousands):

	Solutions	Software	Marine Systems	Total
Balance at January 1, 2013	$2,943	$25,422	$26,984	$55,349
Impact of foreign currency translation adjustments	—	527	—	527
Balance at December 31, 2013	2,943	25,949	26,984	55,876
Reduction due to sale of Source product line[(1)]	—	—	(5,100)	(5,100)
Impairment of goodwill	—	—	(21,884)	(21,884)
Impact of foreign currency translation adjustments	—	(1,504)	—	(1,504)
Balance at December 31, 2014	$2,943	$24,445	$—	$27,388

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(1) In connection with the Company's sale of its Source product line in the second quarter of 2014, the Company reduced goodwill associated with the Marine Systems reporting unit.

(12) 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. As of December 31, 2014, there were 8,986,025 outstanding options under the Company's stock option plans, and 2,752,050 shares available for future grant and issuance.

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 of the Board of Directors of the Company approved fixed pre-established quarterly grant dates for all future grants of options.

Transactions under the stock option plans are summarized as follows:

	Option Price per Share	Outstanding	Vested	Available for Grant
January 1, 2012	$2.49-$16.39	6,791,300	3,844,538	4,793,640
Granted	5.96-7.16	1,544,000	—	(1,544,000)
Vested	—	—	1,060,275	—
Exercised	2.49-7.76	(194,410)	(194,410)	—
Cancelled/forfeited	2.49-15.43	(212,540)	(119,165)	127,125
Restricted stock granted out of option plans	—	—	—	(667,000)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans	—	—	—	229,163
January 1, 2013	2.80-16.39	7,928,350	4,591,238	2,938,928
Increase in shares authorized	—	—	—	3,730,000
Plan Expiration	—	—	—	(79,250)
Granted	3.86-6.64	1,788,300	—	(1,788,300)
Vested	—	—	1,055,412	—
Exercised	2.80-5.81	(707,575)	(707,575)	—
Cancelled/forfeited	3.00-15.43	(750,575)	(353,600)	702,325
Restricted stock granted out of option plans	—	—	—	(714,950)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans	—	—	—	232,700
December 31, 2013	2.83-16.39	8,258,500	4,585,475	5,021,453
Plan Expiration	—	—	—	(66,783)
Granted	2.47–4.17	1,736,400	—	(1,736,400)
Vested	—	—	1,391,251	—
Exercised	3.00	(28,500)	(28,500)	—
Cancelled/forfeited	3.00–15.43	(980,375)	(572,375)	216,800
Restricted stock granted out of option plans	—	—	—	(727,550)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans	—	—	—	44,530
December 31, 2014	$2.47–$16.39	8,986,025	5,375,851	2,752,050

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Stock options outstanding at December 31, 2014 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
$2.47 - $4.58	3,682,125	$ 3.80	7.5 years	1,063,826	$3.54
$4.79 - $7.19	3,683,700	$ 6.23	6.7 years	2,698,075	$6.28
$7.31 - $13.29	838,250	$ 9.26	3.5 years	832,000	$9.25
$14.03 - $16.39	781,950	$ 15.25	3.2 years	781,950	$15.25
Totals	8,986,025	$ 6.30	6.7 years	5,375,851	$7.50

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, 2014	8,258,500	$6.83		6.8 years	
Options granted	1,736,400	$3.96	$2.41		
Options exercised	(28,500)	$3.00			
Options cancelled	(470,500)	$4.94			
Options forfeited	(509,875)	$8.27			
Total outstanding at December 31, 2014	8,986,025	$6.30		6.7 years	$35
Options exercisable and vested at December 31, 2014	5,375,851	$7.50		5.2 years	$—

The total intrinsic value of options exercised during 2014, 2013 and 2012 was less than $0.1 million, $2.0 million and $0.6 million, respectively. Cash received from option exercises under all share-based payment arrangements for 2014, 2013 and 2012 was $0.1 million, $2.5 million and $0.8 million, respectively. The weighted average grant date fair value for stock option awards granted during 2014, 2013 and 2012 was $2.41, $2.52 and $3.54 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 2014 follows:

	Number of Shares/Units
Total nonvested at January 1, 2014	1,052,408
Granted	727,550
Vested	(662,451)
Forfeited	(120,814)
Total nonvested at December 31, 2014	996,693

At December 31, 2014, the intrinsic value of restricted stock and restricted stock unit awards was approximately $2.7 million. The weighted average grant date fair value for restricted stock and restricted stock unit awards granted during 2014, 2013 and 2012 was $3.98, $4.08 and $6.05 per share, respectively. The total fair value of shares vested during 2014, 2013 and 2012 was $2.1 million, $2.4 million and $4.6 million, respectively.

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Employee Stock Purchase Plan

In June 2010, the Company adopted an Employee Stock Purchase Plan ("ESPP") to replace the prior ESPP, which terminated on December 31, 2008. The ESPP allows 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 is limited to purchase no more than 500 shares per offering period or 1,000 shares annually. Additionally, no participant may purchase shares in any calendar year that exceeds $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 is 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 is six months and commences on February 1 and August 1 of each year. The ESPP is considered a compensatory plan under ASC 718, and the Company recorded compensation expense of approximately $0.2 million, $0.2 million and $0.3 million during 2014, 2013 and 2012, 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. The total number of shares of common stock authorized and available for issuance under the ESPP is 928,924. The maximum number of shares of common stock that may be purchased for each offering period is 100,000 (200,000 annually).

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. As of December 31, 2014, the Company had outstanding 140,000 SAR awards to one individual with an exercise price of $3.00. The Company recorded less than $0.1 million, annually, of share-based compensation expense during 2014, 2013 and 2012, related to employee stock appreciation rights. Pursuant to ASC 718, the stock appreciation rights are considered liability awards and as such, these amounts are accrued in the liability section of the balance sheet.

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,		
	2014	2013	2012
Risk-free interest rates	1.6% – 1.7%	0.9% – 1.8%	0.7% – 1.0%
Expected lives (in years)	5.5	5.5	5.5
Expected dividend yield	—%	—%	—%
Expected volatility	65.9% – 70.5%	62.1% – 70.6%	67.8% – 72.2%

The computation of expected volatility during 2014, 2013 and 2012 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 2014, 2013 and 2012 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 table summarizes stock-based compensation expense for the years ended December 31, 2014, 2013 and 2012 as follows (in thousands):

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	Years Ended December 31,		
	2014	2013	2012
Stock-based compensation expense	$8,707	$7,476	$6,598
Tax benefit related thereto	(2,908)	(2,469)	(2,056)
Stock-based compensation expense, net of tax	$5,799	$5,007	$4,542

(13) Supplemental Cash Flow Information and Non-cash Activity

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

	Years Ended December 31,		
	2014	2013	2012
Cash paid during the period for:			
Interest	$16,582	$9,576	$4,625
Income taxes	16,124	15,872	18,146
Non-cash items from investing and financing activities:			
Purchase of computer equipment financed through capital leases	12,153	6,455	4,647
Leasehold improvement paid by landlord	—	5,000	—
Conversion of the Company's investment in a convertible note to equity	3,151	6,765	—
Transfer of inventory to property, plant and equipment	10,149	1,422	6,737
Purchases of property, plant, and equipment and seismic rental equipment financed through accounts payable	472	909	—
Sale of rental equipment financed with a note receivable	—	3,636	—

(14) Operating Leases

Lessee. The Company leases certain equipment, offices and warehouse space under non-cancelable operating leases. Rental expense was $12.9 million, $12.4 million and $14.4 million for 2014, 2013 and 2012, respectively.

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

Years Ending December 31,		
2015	$29,604	[a]
2016	11,428	[a]
2017	9,519	
2018	8,808	
2019	8,730	
Total	$68,089	

[a] Includes $19.9 million and $1.7 million of vessel leases for 2015 and 2016, respectively.

(15) 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.

Investment in Convertible Notes. Since 2011, the Company has invested in and owned a cost–method investment in a privately-owned U.S.–based technology company. As of December 31, 2013, that investment included ownership of approximately 16.0% of the common shares of the investee and $4.0 million loaned to the investee through a promissory note under a credit facility agreement the Company made available to the investee. During 2014, the Company converted this note into additional shares of the investee.

In November 2014, the Company sold its total investment in the investee for total proceeds of approximately $16.5 million, of which $14.1 million was due and paid at closing. In connection with the sale, the Company recorded a gain of approximately $5.5 million. Prior to the sale of the investment, the Company had been performing a fair value analysis using Level 3 inputs. These inputs included a market approach, including terms and likelihood of an investment event.

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

The carrying amounts of the Company's long-term debt as of December 31, 2014 and 2013 were $190.6 million and $220.2 million, respectively, compared to its fair values of $162.6 million and $190.4 million as of December 31, 2014 and 2013, respectively. The fair value of the long-term debt was calculated using Level 1 inputs, including an active market price.

(16) 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 $1.8 million, $1.7 million and $1.4 million, during 2014, 2013 and 2012, respectively.

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

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

In May 2014, the judge signed and entered a Final Judgment in the amount of $123.8 million. Also, the Final Judgment 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 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.

As previously disclosed, the Company has taken a loss contingency accrual of $123.8 million related to this case. Post-judgment interest will continue to accrue until this legal matter is fully resolved. The Company's assessment of its potential loss contingency may change in the future due to developments in the case and other events, such as changes in applicable law, and such reassessment could lead to the determination that no loss contingency is probable or that a greater or lesser loss contingency is probable. Any such reassessment could have a material effect on the Company's financial condition or results of operations.

The Company and WesternGeco have each appealed the Final Judgment to the United States Court of Appeals for the Federal Circuit. The Company filed its appeal brief in September 2014. WesternGeco's appeal brief was filed in October 2014. Oral arguments have been scheduled for March 5, 2015. If the adverse ruling is affirmed, the Company intends to pursue all available opportunities to make further appeals.

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In order to stay the judgment during the appeal, the Company arranged with sureties to post an appeal bond with the trial court on the Company's behalf in the amount of $120.0 million. The terms of the appeal bond arrangements provide the sureties the contractual right for as long as the bond is outstanding to require the Company to post cash collateral for up to the full amount of the bond. If the sureties exercise their right to require collateral while the appeal bond is outstanding, the Company would intend to utilize a combination of cash on hand and undrawn balances available under the Company's New Credit Facility. If the Company is required to collateralize the full amount of the bond, the Company might also seek additional debt and/or equity financing. The collateralization of the full amount of the bond could have a material adverse effect on the Company's liquidity. Any requirements that the Company collateralize the appeal bond will reduce its liquidity and may reduce the amount otherwise available to be borrowed under its New Credit Facility. No assurances can be made whether the Company's efforts to raise additional cash would be successful and, if so, on what terms and conditions, and at what cost the Company might be able to secure any such financing. The Company will incur fees of approximately $2.0 million per year to maintain the appeal bond until such time as the appeal bond is no longer required.

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.

(18) Selected Quarterly Information — (Unaudited)

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

	Three Months Ended			
Year Ended December 31, 2014	March 31	June 30	September 30	December 31
Service revenues	$110,696	$89,767	$71,923	$112,552
Product revenues	34,002	31,713	34,617	24,288
Total net revenues	144,698	121,480	106,540	136,840
Gross profit (loss)	56,854	38,228	29,223	(62,082)
Income (loss) from operations	19,671	3,785	(5,349)	(136,036)
Interest expense, net	(4,797)	(4,934)	(5,048)	(4,603)
Equity in losses of Investments	(1,688)	(1,781)	(5,558)	(40,458)
Other income (expense)	68,526	6,066	(622)	5,890
Income tax expense	5,263	653	8,345	6,321
Net (income) loss attributable to noncontrolling interests	(470)	(1,295)	381	650
Net income (loss) applicable to common shares	$75,979	$1,188	$(24,541)	$(180,878)
Net income (loss) per share:				
Basic	$0.46	$0.01	$(0.15)	$(1.10)
Diluted	$0.46	$0.01	$(0.15)	$(1.10)

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	Three Months Ended			
Year Ended December 31, 2013	March 31	June 30	September 30	December 31
Service revenues	$89,949	$89,603	$44,679	$167,086
Product revenues	39,788	31,312	35,159	51,591
Total net revenues	129,737	120,915	79,838	218,677
Gross profit (loss)	34,957	36,618	(15,104)	102,842
Income (loss) from operations	1,923	6,770	(56,528)	64,231
Interest expense, net	(1,066)	(2,756)	(4,281)	(4,241)
Equity in earnings (losses) of Investments	1,116	(6,338)	(5,192)	(31,906)
Other income (expense)	1,027	(107,118)	(74,301)	(2,138)
Income tax expense (benefit)	1,201	(38,705)	56,954	6,270
Net (income) loss attributable to noncontrolling interests	76	(59)	498	143
Preferred stock dividends	338	338	5,338	—
Net income (loss) applicable to common shares	$1,537	$(71,134)	$(202,096)	$19,819
Net income (loss) per share:				
Basic	$0.01	$(0.45)	$(1.29)	$0.12
Diluted	$0.01	$(0.45)	$(1.29)	$0.12

(19) Certain Relationships and Related Party Transactions

For 2014, 2013 and 2012, the Company recorded revenues from BGP of $6.5 million, $8.0 million and $13.7 million, respectively. Receivables due from BGP were $1.1 million and $1.5 million at December 31, 2014 and 2013, respectively. BGP owned approximately 14.5% of the Company's outstanding common stock as of December 31, 2014. At December 31, 2014, the Company owed BGP $1.3 million for unpaid services received for a seismic acquisition project.

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 6.4% of the Company's outstanding common stock as of December 31, 2014.

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. Under an amended lease of commercial property dated February 1, 2006, between Lapeyre Properties, L.L.C. (an affiliate of Laitram) and ION, the Company had previously leased certain office and warehouse space from Lapeyre Properties that was vacated in 2013. During 2014, the Company paid Laitram and its affiliates a total of approximately $2.4 million, which consisted of approximately $2.3 million for manufacturing services, and $0.1 million for reimbursement for costs related to providing administrative and other back-office support services in connection with the Company's Louisiana marine operations. For the 2013 and 2012 fiscal years, the Company paid Laitram and its affiliates a total of approximately $4.2 million and $4.1 million, respectively, for these services. 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. The maturity date of the promissory note was extended to December 31, 2014. The loan was made by the Company to support certain short-term working capital needs of INOVA Geophysical. The indebtedness under the note accrues

interest at an annual rate equal to the London Interbank Offered Rate plus 650 basis points. In 2013, the Company advanced the full principal amount of $10.0 million to INOVA Geophysical under the promissory note. INOVA Geophysical has repaid a total of $6.0 million, of which $4.0 million remained outstanding at December 31, 2014. The term of the note has not been extended past December 31, 2014 and INOVA has advised the Company that it is not currently able to repay the outstanding amount. In connection with the preparation of these financial statements, the Company wrote down the book value of this receivable to zero.

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With the Prior Credit Facility being replaced by the New Credit Facility in August 2014, INOVA no longer provides a bank stand-by letter of credit as credit support for the Company's obligations under the New Credit Facility. For further information regarding the Company's New Credit Facility, see Footnote 6 "Long-term Debt and Lease Obligations."

(20) 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. This new guidance replaces virtually all existing U.S. GAAP and IFRS guidance on revenue recognition. The new guidance is effective for fiscal years beginning after December 15, 2016. This new guidance applies to all periods presented. Therefore, when the Company issues its financial statements on Forms 10-Q and 10-K for periods included in its year ended December 31, 2017, its comparative periods that are presented from the years ended December 31, 2015 and 2016, must be retrospectively presented in compliance with this new guidance. Early adoption is not allowed for U.S. GAAP. The new guidance requires companies to make more estimates and use more judgment than under current accounting guidance. The Company is currently evaluating (i) the two allowed adoption methods to determine which method it plans to use for retrospective presentation of comparative periods and (ii) whether the implementation of this new guidance will have a material impact on the Company's consolidated financial position or results of operations for the periods presented.

Reporting Discontinued Operations — In April 2014, the FASB issued amendments to guidance for reporting discontinued operations and disposals of components of an entity. The amended guidance requires that a disposal representing a strategic shift that has (or will have) a major effect on an entity's financial results or a business activity classified as held for sale should be reported as discontinued operations. The amendments also expand the disclosure requirements for discontinued operations and add new disclosures for individually significant dispositions that do not qualify as discontinued operations. The amendments are effective prospectively for fiscal years, and interim reporting periods within those years, beginning after December 15, 2014 (early adoption is permitted only for disposals that have not been previously reported). The implementation of the amended guidance is not expected to have a material impact on the Company's consolidated financial position or results of operations.

(21) Condensed Consolidating Financial Information

In May 2013, the Company sold $175 million of Senior Secured Second-Priority Notes. 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.

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Balance Sheet	December 31, 2014 ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
ASSETS					
Current assets:					
Cash and cash equivalents	$109,514	$—	$64,094	$—	$173,608
Accounts receivable, net	123	49,892	64,310	—	114,325
Unbilled receivables	—	18,548	4,051	—	22,599
Inventories	—	4,013	47,149	—	51,162
Prepaid expenses and other current assets	6,692	2,697	8,769	(4,496)	13,662
Total current assets	116,329	75,150	188,373	(4,496)	375,356
Deferred income tax asset	(7,852)	6,675	749	9,032	8,604
Property, plant, equipment and seismic rental equipment, net	6,412	33,065	30,363	—	69,840
Multi-client data library, net	—	96,423	22,246	—	118,669
Investment in subsidiaries	675,499	278,294	—	(953,793)	—
Goodwill	—	—	27,388	—	27,388
Intangible assets, net	—	6,254	534	—	6,788
Intercompany receivables	29,979	—	—	(29,979)	—
Other assets	10,191	147	274	—	10,612
Total assets	$830,558	$496,008	$269,927	$(979,236)	$617,257
LIABILITIES AND EQUITY					
Current liabilities:					
Current maturities of long-term debt	$—	$6,965	$684	$—	$7,649
Accounts payable	4,308	12,028	20,527	—	36,863
Accrued expenses	3,904	34,738	21,807	4,815	65,264
Accrued multi-client data library royalties	—	34,624	595	—	35,219
Deferred revenue	—	5,263	2,999	—	8,262
Total current liabilities	8,212	93,618	46,612	4,815	153,257
Long-term debt, net of current maturities	175,000	7,839	106	—	182,945
Intercompany payables	509,124	8,892	21,087	(539,103)	—
Other long-term liabilities	2,609	130,985	10,489	(279)	143,804
Total liabilities	694,945	241,334	78,294	(534,567)	480,006
Redeemable noncontrolling interest	—	—	1,539	—	1,539
Equity:					
Common stock	1,645	290,460	19,138	(309,598)	1,645
Additional paid-in capital	887,749	180,700	234,234	(414,934)	887,749
Accumulated earnings (deficit)	(734,409)	208,846	26,981	(235,827)	(734,409)
Accumulated other comprehensive income (loss)	(12,807)	6,229	(12,795)	6,566	(12,807)
Due from ION Geophysical Corporation	—	(431,561)	(77,563)	509,124	—
Treasury stock	(6,565)	—	—	—	(6,565)
Total stockholders' equity	135,613	254,674	189,995	(444,669)	135,613
Noncontrolling interests	—	—	99	—	99
Total equity	135,613	254,674	190,094	(444,669)	135,712
Total liabilities and equity	$830,558	$496,008	$269,927	$(979,236)	$617,257

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Balance Sheet	December 31, 2013 ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
ASSETS					
Current assets:					
Cash and cash equivalents	$124,701	$—	$23,355	$—	$148,056
Accounts receivable, net	1,874	99,547	48,027	—	149,448
Unbilled receivables	—	33,490	15,978	—	49,468
Inventories	—	6,595	50,578	—	57,173
Prepaid expenses and other current assets	12,888	5,030	7,438	(584)	24,772
Total current assets	139,463	144,662	145,376	(584)	428,917
Deferred income tax asset	6,513	6,960	489	688	14,650
Property, plant, equipment and seismic rental equipment, net	6,440	29,845	10,399	—	46,684
Multi-client data library, net	—	212,572	26,212	—	238,784
Equity method investments	51,065	—	2,800	—	53,865
Investment in subsidiaries	699,695	248,482	—	(948,177)	—
Goodwill	—	26,984	28,892	—	55,876
Intangible assets, net	—	8,246	3,001	—	11,247
Intercompany receivables	8,313	13,419	—	(21,732)	—
Other assets	14,315	56	24,262	(23,985)	14,648
Total assets	$925,804	$691,226	$241,431	$(993,790)	$864,671
LIABILITIES AND EQUITY					
Current liabilities:					
Current maturities of long-term debt	$—	$4,716	$1,190	$—	$5,906
Accounts payable	3,515	11,741	7,364	34	22,654
Accrued expenses	16,652	54,250	13,392	64	84,358
Accrued multi-client data library royalties	—	45,921	539	—	46,460
Deferred revenue	—	16,387	4,295	—	20,682
Total current liabilities	20,167	133,015	26,780	98	180,060
Long-term debt, net of current maturities	210,000	3,655	591	—	214,246
Intercompany payables	426,134	—	21,732	(447,866)	—
Other long-term liabilities	11,757	214,211	8,637	(24,003)	210,602
Total liabilities	668,058	350,881	57,740	(471,771)	604,908
Redeemable noncontrolling interests	—	—	1,878	—	1,878
Equity:					
Common stock	1,637	290,460	19,138	(309,598)	1,637
Additional paid-in capital	879,969	180,700	235,381	(416,081)	879,969
Accumulated earnings (deficit)	(606,157)	232,186	(4,010)	(228,176)	(606,157)
Accumulated other comprehensive income (loss)	(11,138)	6,218	(11,920)	5,702	(11,138)
Due from ION Geophysical Corporation	—	(369,219)	(56,915)	426,134	—
Treasury stock	(6,565)	—	—	—	(6,565)
Total stockholders' equity	257,746	340,345	181,674	(522,019)	257,746
Noncontrolling interests	—	—	139	—	139
Total equity	257,746	340,345	181,813	(522,019)	257,885
Total liabilities and equity	$925,804	$691,226	$241,431	$(993,790)	$864,671

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	Year Ended December 31, 2014				
Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Total net revenues	$—	$221,008	$291,302	$(2,752)	$509,558
Cost of goods sold	—	262,829	187,258	(2,752)	447,335
Gross profit (loss)	—	(41,821)	104,044	—	62,223
Total operating expenses	38,961	88,481	52,710	—	180,152
Income (loss) from operations	(38,961)	(130,302)	51,334	—	(117,929)
Interest expense, net	(18,537)	(245)	(600)	—	(19,382)
Intercompany interest, net	(340)	2,146	(1,806)	—	—
Equity in earnings (losses) of investments	(74,615)	32,043	738	(7,651)	(49,485)
Other income	4,536	74,295	1,029	—	79,860
Income (loss) before income taxes	(127,917)	(22,063)	50,695	(7,651)	(106,936)
Income tax expense	335	1,277	18,970	—	20,582
Net income (loss)	(128,252)	(23,340)	31,725	(7,651)	(127,518)
Net income attributable to noncontrolling interests	—	—	(734)	—	(734)
Net income (loss) applicable to common shares	$(128,252)	$(23,340)	$30,991	$(7,651)	$(128,252)
Comprehensive net income (loss)	$(129,921)	$(23,329)	$30,850	$(6,787)	$(129,187)
Comprehensive income attributable to noncontrolling interest	—	—	(734)	—	(734)
Comprehensive net income (loss) attributable to ION	$(129,921)	$(23,329)	$30,116	$(6,787)	$(129,921)

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	Year Ended December 31, 2013				
Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Total net revenues	$—	$337,570	$213,826	$(2,229)	$549,167
Cost of goods sold	—	240,704	151,379	(2,229)	389,854
Gross profit	—	96,866	62,447	—	159,313
Total operating expenses	35,054	62,028	45,835	—	142,917
Income (loss) from operations	(35,054)	34,838	16,612	—	16,396
Interest expense, net	(12,102)	(49)	(193)	—	(12,344)
Intercompany interest, net	411	(1,374)	963	—	—
Equity in earnings (losses) of investments	(192,220)	(19,755)	(19,833)	189,488	(42,320)
Other income (expense)	12,166	(193,289)	(1,407)	—	(182,530)
Income (loss) before income taxes	(226,799)	(179,629)	(3,858)	189,488	(220,798)
Income tax expense (benefit)	19,061	(10,883)	17,542	—	25,720
Net income (loss)	(245,860)	(168,746)	(21,400)	189,488	(246,518)
Net loss attributable to noncontrolling interests	—	—	658	—	658
Net income (loss) attributable to ION	(245,860)	(168,746)	(20,742)	189,488	(245,860)
Payment of preferred dividends and conversion payment	6,014	—	—	—	6,014
Net income (loss) applicable to common shares	$(251,874)	$(168,746)	$(20,742)	$189,488	$(251,874)
Comprehensive net income (loss)	$(245,112)	$(168,167)	$(20,779)	$188,288	$(245,770)
Comprehensive loss attributable to noncontrolling interest	—	—	658	—	658
Comprehensive net income (loss) attributable to ION	$(245,112)	$(168,167)	$(20,121)	$188,288	$(245,112)

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	Year Ended December 31, 2012				
Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Total net revenues	$—	$311,758	$214,939	$(380)	$526,317
Cost of goods sold	—	192,639	118,257	(380)	310,516
Gross profit	—	119,119	96,682	—	215,801
Total operating expenses	35,982	61,315	43,977	—	141,274
Income (loss) from operations	(35,982)	57,804	52,705	—	74,527
Interest expense, net	(5,137)	198	(326)	—	(5,265)
Intercompany interest, net	232	(629)	397	—	—
Equity in earnings (losses) of investments	58,162	33,958	—	(91,823)	297
Other income (expense)	29,447	(10,334)	(1,989)	—	17,124
Income (loss) before income taxes	46,722	80,997	50,787	(91,823)	86,683
Income tax expense (benefit)	(16,593)	21,771	18,679	—	23,857
Net income (loss)	63,315	59,226	32,108	(91,823)	62,826
Net loss attributable to noncontrolling interests	—	—	489	—	489
Net income (loss) attributable to ION	63,315	59,226	32,597	(91,823)	63,315
Preferred stock dividends	1,352	—	—	—	1,352
Net income (loss) applicable to common shares	$61,963	$59,226	$32,597	$(91,823)	$61,963
Comprehensive net income (loss)	$67,622	$62,085	$34,967	$(97,541)	$67,133
Comprehensive loss attributable to noncontrolling interest	—	—	489	—	489
Comprehensive net income (loss) attributable to ION	$67,622	$62,085	$35,456	$(97,541)	$67,622

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Statement of Cash Flows	Year Ended December 31, 2014			
	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	$(53,925)	$107,590	$76,115	$129,780
Cash flows from investing activities:				
Investment in multi-client data library	—	(67,552)	(233)	(67,785)
Purchase of property, plant, equipment and seismic rental equipment	(1,240)	(4,530)	(2,494)	(8,264)
Repayment of advances by INOVA Geophysical	1,000	—	—	1,000
Net investment in and advances to OceanGeo B.V. prior to its consolidation	—	—	(3,074)	(3,074)
Net proceeds from sale of Source product line	—	9,881	4,513	14,394
Proceeds from sale of cost method investments	14,051	—	—	14,051
Other investing activities	579	26	323	928
Net cash provided by (used in) investing activities	14,390	(62,175)	(965)	(48,750)
Cash flows from financing activities:				
Payments under revolving line of credit	(50,000)	—	—	(50,000)
Borrowings under revolving line of credit	15,000	—	—	15,000
Payments on notes payable and long-term debt	—	(5,384)	(7,614)	(12,998)
Cost associated with issuance of debt	(2,194)	—	—	(2,194)
Intercompany lending	61,324	(40,031)	(21,293)	—
Acquisition of noncontrolling interest	—	—	(6,000)	(6,000)
Proceeds from employee stock purchases and exercise of stock options	577	—	—	577
Other financing activities	(359)	—	—	(359)
Net cash provided by (used in) financing activities	24,348	(45,415)	(34,907)	(55,974)
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	496	496
Net increase (decrease) in cash and cash equivalents	(15,187)	—	40,739	25,552
Cash and cash equivalents at beginning of period	124,701	—	23,355	148,056
Cash and cash equivalents at end of period	$109,514	$—	$64,094	$173,608

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Statement of Cash Flows	Year Ended December 31, 2013				
	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Cash flows from operating activities:					
Net cash provided by (used in) operating activities	$(50,731)	$166,838	$31,480	$—	$147,587
Cash flows from investing activities:					
Investment in multi-client data library	—	(111,689)	(2,893)	—	(114,582)
Purchase of property, plant, equipment and seismic rental equipment	(2,075)	(10,171)	(4,668)	—	(16,914)
Net advances to INOVA Geophysical	(5,000)	—	—	—	(5,000)
Investment in and advances to OceanGeo B.V.	—	—	(24,755)	—	(24,755)
Proceeds from sale of cost method investments	4,150	—	—	—	4,150
Investment in convertible notes	(2,000)	—	—	—	(2,000)
Capital contribution to affiliate	(5,695)	(7,897)	—	13,592	—
Other investing activities	—	128	—	—	128
Net cash provided by (used in) investing activities	(10,620)	(129,629)	(32,316)	13,592	(158,973)
Cash flows from financing activities:					
Proceeds from issuance of notes	175,000	—	—	—	175,000
Payments under revolving line of credit	(97,250)	—	—	—	(97,250)
Borrowings under revolving line of credit	35,000	—	—	—	35,000
Payments on notes payable and long-term debt	—	(3,249)	(1,112)	—	(4,361)
Cost associated with issuance of debt	(6,773)	—	—	—	(6,773)
Capital contribution from affiliate	—	5,695	7,897	(13,592)	—
Intercompany lending	52,646	(39,655)	(12,991)	—	—
Payment of preferred dividends	(6,014)	—	—	—	(6,014)
Proceeds from employee stock purchases and exercise of stock options	2,527	—	—	—	2,527
Other financing activities	573	—	—	—	573
Net cash provided by (used in) financing activities	155,709	(37,209)	(6,206)	(13,592)	98,702
Effect of change in foreign currency exchange rates on cash and cash equivalents	—	—	(231)	—	(231)
Net increase (decrease) in cash and cash equivalents	94,358	—	(7,273)	—	87,085
Cash and cash equivalents at beginning of period	30,343	—	30,628	—	60,971
Cash and cash equivalents at end of period	$124,701	$—	$23,355	$—	$148,056

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Statement of Cash Flows	Year Ended December 31, 2012			
	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Total Consolidated
	(In thousands)			
Cash flows from operating activities:				
Net cash provided by operating activities	$19,362	$105,768	$43,951	$169,081
Cash flows from investing activities:				
Investment in multi-client data library	—	(121,424)	(24,203)	(145,627)
Purchase of property, plant, equipment and seismic rental equipment	(2,485)	(9,947)	(4,218)	(16,650)
Maturity of short-term investments	20,000	—	—	20,000
Investment in convertible notes	(2,000)	—	—	(2,000)
Net cash provided by (used in) investing activities	15,515	(131,371)	(28,421)	(144,277)
Cash flows from financing activities:				
Payments under revolving line of credit	(51,000)	—	—	(51,000)
Borrowings under revolving line of credit	148,250	—	—	148,250
Payments on notes payable and long-term debt	(99,270)	(1,626)	(806)	(101,702)
Intercompany lending	(21,699)	27,229	(5,530)	—
Payment of preferred dividends	(1,352)	—	—	(1,352)
Proceeds from employee stock purchases and exercise of stock options	807	—	—	807
Other financing activities	(1,669)	—	212	(1,457)
Net cash provided by (used in) financing activities	(25,933)	25,603	(6,124)	(6,454)
Effect of change in foreign currency exchange rates on cash and cash equivalents	2	—	217	219
Net increase in cash and cash equivalents	8,946	—	9,623	18,569
Cash and cash equivalents at beginning of period	21,397	—	21,005	42,402
Cash and cash equivalents at end of period	$30,343	$—	$30,628	$60,971

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SCHEDULE II
ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS

Year Ended December 31, 2012	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
Allowances for doubtful accounts	$1,198	$5,811	$(298)	$6,711
Warranty	715	1,258	(932)	1,041
Valuation allowance on deferred tax assets	69,475	(6,214)	—	63,261
Excess and obsolete inventory	13,037	1,326	(124)	14,239
Year Ended December 31, 2013	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
Allowances for doubtful accounts	$6,711	$12,040	$(11,529)	$7,222
Warranty	1,041	538	(936)	643
Valuation allowance on deferred tax assets	63,261	88,112	(338)	151,035
Excess and obsolete inventory	14,239	18,644	(328)	32,555
Year Ended December 31, 2014	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
Allowances for doubtful accounts	$7,222	$7,275	$(6,864)	$7,633
Allowances for doubtful notes receivable	—	4,000	—	4,000
Warranty	643	381	(625)	399
Valuation allowance on deferred tax assets	151,035	54,229	—	205,264
Excess and obsolete inventory	32,555	6,952	(9,703)	29,804

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EXHIBIT INDEX

3.1	—	Restated Certificate of Incorporation dated September 24, 2007 filed on September 24, 2007 as Exhibit 3.4 to the Company's Current Report on Form 8-K and incorporated herein 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.
3.3	—	Certificate of Ownership and Merger merging ION Geophysical Corporation with and into Input/Output, Inc. dated September 21, 2007, filed on September 24, 2007 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.1	—	Certificate of Rights and Designations of Series D-1 Cumulative Convertible Preferred Stock, dated February 16, 2005 and filed on February 17, 2005 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.2	—	Certificate of Elimination of Series B Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.3	—	Certificate of Elimination of Series C Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.3 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.4	—	Certificate of Designation of Series D-2 Cumulative Convertible Preferred Stock dated December 6, 2007, filed on December 6, 2007 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.5	—	Certificate of Designations of Series A Junior Participating Preferred Stock of ION Geophysical Corporation effective as of December 31, 2008, filed on January 5, 2009 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.6	—	Certificate of Elimination of Series A Junior Participating Preferred Stock dated February 10, 2012, filed on February 13, 2012 as Exhibit 3.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
4.7	—	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.
4.8	—	Registration Rights Agreement, dated May 13, 2013, among ION Geophysical Corporation, the subsidiary guarantors named therein and Citigroup Global Markets Inc. and Wells Fargo Securities, LLC, as representatives of the initial purchasers named therein, filed on May 13, 2013 as Exhibit 4.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.9	—	Certificate of Elimination of Series D-1 Cumulative Convertible Preferred Stock dated September 30, 2013, filed on September 30, 2013 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.10	—	Certificate of Elimination of Series D-2 Cumulative Convertible Preferred Stock dated September 30, 2013, filed on September 30, 2013 as Exhibit 3.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.1	—	Amended and Restated 1990 Stock Option Plan, filed on June 9, 1999 as Exhibit 4.2 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
10.2	—	Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park II, LP as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.

10.3	—	Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park District as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
**10.4	—	Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan, filed on June 9, 1999 as Exhibit 4.3 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
**10.5	—	Amendment No. 1 to the Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan dated September 13, 1999 filed on November 14, 1999 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended August 31, 1999 and incorporated herein by reference.

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**10.6	—	Input/Output, Inc. Employee Stock Purchase Plan, filed on March 28, 1997 as Exhibit 4.4 to the Company's Registration Statement on Form S-8 (Registration No. 333-24125), and incorporated herein by reference.
**10.7	—	Fifth Amended and Restated - 2004 Long-Term Incentive Plan, filed as Appendix A to the definitive proxy statement for the 2010 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 21, 2010, and incorporated herein by reference.
10.8	—	Registration Rights Agreement dated as of November 16, 1998, by and among the Company and The Laitram Corporation, filed on March 12, 2004 as Exhibit 10.7 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003, and incorporated herein by reference.
**10.9	—	Input/Output, Inc. 1998 Restricted Stock Plan dated as of June 1, 1998, filed on June 9, 1999 as Exhibit 4.7 to the Company's Registration Statement on S-8 (Registration No. 333-80297), and incorporated herein by reference.
**10.10	—	Input/Output Inc. Non-qualified Deferred Compensation Plan, filed on April 1, 2002 as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2001, and incorporated herein by reference.
**10.11	—	Input/Output, Inc. 2000 Restricted Stock Plan, effective as of March 13, 2000, filed on August 17, 2000 as Exhibit 10.27 to the Company's Annual Report on Form 10-K for the fiscal year ended May 31, 2000, and incorporated herein by reference.
**10.12	—	Input/Output, Inc. 2000 Long-Term Incentive Plan, filed on November 6, 2000 as Exhibit 4.7 to the Company's Registration Statement on Form S-8 (Registration No. 333-49382), and incorporated by reference herein.
**10.13	—	Employment Agreement dated effective as of March 31, 2003, by and between the Company and Robert P. Peebler, filed on March 31, 2003 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.14	—	First Amendment to Employment Agreement dated September 6, 2006, between Input/Output, Inc. and Robert P. Peebler, filed on September 7, 2006, as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.15	—	Second Amendment to Employment Agreement dated February 16, 2007, between Input/Output, Inc. and Robert P. Peebler, filed on February 16, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.16	—	Third Amendment to Employment Agreement dated as of August 20, 2007 between Input/Output, Inc. and Robert P. Peebler, filed on August 21, 2007 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.17	—	Fourth Amendment to Employment Agreement, dated as of January 26, 2009, between ION Geophysical Corporation and Robert P. Peebler, filed on January 29, 2009 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.18	—	Employment Agreement dated effective as of June 15, 2004, by and between the Company and David L. Roland, filed on August 9, 2004 as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.
**10.19	—	GX Technology Corporation Employee Stock Option Plan, filed on August 9, 2004 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.
10.20	—	Concept Systems Holdings Limited Share Acquisition Agreement dated February 23, 2004, filed on March 5, 2004 as Exhibit 2.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.21	—	Registration Rights Agreement by and between ION Geophysical Corporation and 1236929 Alberta Ltd. dated September 18, 2008, filed on November 7, 2008 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q and incorporated herein by reference.

**10.22	—	Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — Concept Systems Employment Inducement Stock Option Program, filed on July 27, 2004 as Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Reg. No. 333-117716), and incorporated herein by reference.
**10.23	—	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.
**10.24	—	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.

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**10.25	—	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.
**10.26	—	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.
10.27	—	Canadian Master Loan and Security Agreement dated as of June 29, 2009 by and among ICON ION, LLC, as lender, ION Geophysical Corporation and ARAM Rentals Corporation, a Nova Scotia corporation, filed on August 6, 2009 as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
10.28	—	Master Loan and Security Agreement (U.S.) dated as of June 29, 2009 by and among ICON ION, LLC, as lender, ION Geophysical Corporation and ARAM Seismic Rentals, Inc., a Texas corporation, filed on August 6, 2009 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
10.29	—	Registration Rights Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation filed on March 1, 2010 as Exhibit 10.54 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference.
10.30	—	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.
10.31	—	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.
10.32	—	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.
10.33	—	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.
**10.34	—	Fifth Amendment to Employment Agreement dated June 1, 2010, between ION Geophysical Corporation and Robert P. Peebler, filed on June 1, 2010 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.35	—	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.
**10.36	—	Employment Agreement dated effective as of November 28, 2011, between ION Geophysical Corporation and Gregory J. Heinlein, filed on December 1, 2011 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.37	—	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.
**10.38	—	Consulting Services Agreement dated January 1, 2013, between ION Geophysical Corporation and The Peebler Group LLC, filed on January 4, 2013 as Exhibit 10.1 to the Company's Current Report on Form

		8-K, and incorporated herein by reference.
10.39	—	2013 Long-Term Incentive Plan, filed as Exhibit 1 to the definitive proxy statement for the 2013 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 16, 2013, and incorporated herein by reference.
10.40	—	Purchase Agreement, dated May 8, 2013, among ION Geophysical Corporation, the subsidiary guarantors named therein and Citigroup Global Markets Inc. and Wells Fargo Securities, LLC, as representatives of the initial purchasers named therein, filed on May 13, 2013 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
10.41	—	Second Lien Intercreditor Agreement by and among China Merchants Bank Co., Ltd., New York Branch, as administrative agent, first lien representative for the first lien secured parties and collateral agent for the first lien secured parties, Wilmington Trust Company, National Association, as trustee and second lien representative for the second lien secured parties, and U.S. Bank National Association, as collateral agent for the second lien secured parties, and acknowledged and agreed to by ION Geophysical Corporation and the other grantors named therein, filed on May 13, 2013 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.

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10.42	—	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.
**10.43	—	Transition and Separation Agreement dated effective as of October 30, 2014, by and between ION Geophysical Corporation and Gregory J. Heinlein.
**10.44	—	Employment Agreement dated effective as of November 13, 2014, between ION Geophysical Corporation and Steve Bate.
*21.1	—	Subsidiaries of the Company.
*23.1	—	Consent of Grant Thornton LLP.
*23.2	—	Consent of Ernst & Young LLP.
*24.1	—	The Power of Attorney is set forth on the signature page hereof.
25.1	—	Registration Statement (Form S-4 No. 333-194110) of ION Geophysical Corporation, and incorporated herein by reference.
*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	—	The following materials are formatted in Extensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets at December 31, 2014 and 2013, (ii) Consolidated Statements of Operations for the years ended December 31, 2014, 2013 and 2012, (iii) Comprehensive Income (Loss) for the years ended December 31, 2014, 2013 and 2012, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2014, 2013 and 2012, (v) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2014, 2013 and 2012, (vi) Footnotes to Consolidated Financial Statements and (vii) Schedule II – Valuation and Qualifying Accounts.

* Filed herewith.

** Management contract or compensatory plan or arrangement.